

POLSKA AKADEMIA UMIEJĘTNOŚCI  
INSTYTUT EKONOMICZNY

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# STUDIA EKONOMICZNE

## ECONOMIC STUDIES

IV

KRAKÓW 1937

NAKŁADEM POLSKIEJ AKADEMII UMIEJĘTNOŚCI

SKŁAD GŁÓWNY W KSIĘGARNIACH GEBETHNERA I WOLFFA  
WARSZAWA—KRAKÓW—ŁÓDŹ—POZNAŃ—WILNO—ZAKOPANE

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REDAKCJA (EDITORS): PROF. DR ADAM HEYDEL  
DR WŁODZIMIERZ HAGEMEJER

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POLSKA AKADEMIA UMIEJĘTNOŚCI, KRAKÓW, UL. SŁAWKOWSKA 17

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## LAND REFORM AND DECAPITALISATION

### I

I have before my eyes a study on the above problem by Miss Doreen Warriner<sup>1</sup>.

Both the method and the conclusions of the author call for certain reservations.

1. The problem of land reform from the point of view of its connection with the processes of accumulation of capital and decapitalisation may be examined from a twofold standpoint.

The victorious struggle of the peasantry for land can be accepted as a point of issue of the examination, and it may be assumed that it is one of the elemental and unavoidable processes which will continue to mark the direction of the natural evolution of the social and economic structure of Poland.

Starting from a historically-sociological assumption, it is from the point of view of the problems of "planning" superfluous to reflect upon the favourable or unfavourable influence of allegedly unavoidable agrarian dynamics on the tempo of the accumulation or consumption of the social capital; the problem of capitalisation or decapitalisation against the background of "land reform" is reduced in this case exclusively to the question whether the facilitation and acceleration of the natural process by means of proper legal and financial state intervention modifies in any way whatsoever the decapitalising or capitalising effect of the spontaneous evolution of the agrarian structure.

The conclusions drawn from such an analysis will of course have a relative, tentative value depending on the correctness

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<sup>1</sup> Cf. *Studia Ekonomiczne* III, 1936. Doreen Warriner; *Land Reform and the Problem of Capitalisation*.

of the basic assumption which in turn depends on a twofold problem i. e. the problem of the durability of the hitherto prevailing direction of the natural evolution of conditions and the question of the degree in which one may and ought to change — by means of a proper intervention policy — this direction in the name of the whole system of the interests of the national economy<sup>1</sup>. Quite different is a theoretical approach to the problem of decapitalisation on the basis of agrarian reform. In this case the explanation is involved whether and in what measure parcellisation, destroying capital goods invested in large scale production and causing an additional demand for capital dispositions, binds and uses them in a way most profitable and most proper in a given economic situation creating

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<sup>1</sup> In this respect one should be on one's guard against treating this evolution as the effect of a certain system of conditions of an exclusively economic nature. I cannot agree with Miss Warriner's statement that at a certain ratio of the rate of natural increase of population to the rate of capitalisation — a low estimation of his own work and capital by the peasant would necessarily be bound to bring about a change in the distribution of land property (the dividing up of larger enterprises).

The decisive moments as to the trend of natural evolution lie no doubt with the psychical factors of which some are socially advantageous (e. g. the peasant's attachment to the soil) and some disadvantageous (as the too narrow range of the peasant's interests and initiative enclosed within the limits of the village hedges and the family field).

It is easily conceivable that the widening of these horizons through the development of general culture (education), even when maintaining the socially advantageous preference of the rural population to work independently on their own farms instead of being dependent, could direct the labour and capital of the surplus rural population to small town trade and commerce, this process going on at the same quantitative ratio between the growth of population and growth of capital.

In other words the quantitative rise of capitalisation does not determine the direction of the utilisation of capital, and on the other hand agriculture is not the only branch and form of production characterised by an elastic and in general high ratio of labour to capital.

Another problem is constituted by the question whether and in what measure one is to consider the natural evolution of agrarian conditions as an untouchable "taboo" even if the direction of the changes should be disadvantageous for the national economy. Should not in this case this movement be stopped, were it even by deciding on and introducing "anti-reform" measures?



the most suitable conditions, both objective and subjective, for a further growth of social capital.

The solution of this problem should be sought, in the first place, in an analysis of the causal relationship between the large scale and the small scale type of agricultural production respectively, and its private as well as social rentability.

Such a treatment of the problem is no doubt more complete, the width and profundity of the problem being incomparably greater, but both methods of approach to the problem with which we are concerned are admissible. What is inadmissible is a jumping from one problem to the other in the course of reasoning.

To such a mental jump we are induced by Miss Warriner, when, starting with an analysis of the doctrinally theoretical problem, she subsequently changes the essence of the problem, and stating that "land reform only accelerates a process which in any event would have occurred"<sup>1</sup>, (p. 8) examines only the difference which in the effects of the natural evolution of the land structure is introduced by the fact of its acceleration by State intervention<sup>2</sup>.

2. When one wishes to speak of the effect of land reform on the processes of capitalisation or decapitalisation it is not sufficient to give the economic definition of those processes, but one must also establish what is understood by the term "land reform".

We know that in its narrower sense it is a certain set of legal and financial means tending to bring about translocations in the distribution of landed property from larger to smaller estates, to enlarge the area of small scale production at the expense of larger estates.

But such a treatment of "land reform" seems to be too broad (general) when the analysis of the effect of this phenomenon on the processes of decapitalisation is concerned. For

<sup>1</sup> We have already explained above why we do not consider the parcellisation of larger estates as an unavoidable process in relation to a certain association of economic conditions.

<sup>2</sup> It is unnecessary to explain that the conclusions of such an argumentation seem to be bound by the uniformity not so much of rationalistic as of voluntaristic moments.

no doubt these processes will shape themselves differently in the case of so-called "neighbourhood parcellisation" which has for its aim the enlarging of undersized farms, and differently in the case of "settlement parcellisation" in favour of village elements possessing no land.

On the other hand the subjective conditions of the processes of accumulation of capital and decapitalisation will probably arrange themselves differently depending on the range of the means of agrarian policy. A different influence is probably exercised by a restriction of State intervention and planning to a supervision and a certain compression of land prices in the free market of supply and demand which shapes itself under the influence of the free play of natural selection, while a different effect will be exercised by a radical policy of compulsory purchase of land in order to give it to the masses in a way injurious for the development of rural economic individualism<sup>1</sup>. In consequence both objective and subjective factors influencing the size and direction (positive or negative) of accumulation shape themselves differently in dependence on *a*) the range and means of the intervention policy and *b*) the concrete forms assumed by the increase of the specific weight of smaller farms in the general agrarian structure.

In face of the multiformity with which we have to do here the well-known French saying "*La vérité est dans les nuances*" proves true.

3. But let us put aside the analysis of the forms and their alternatives in which the programme of "land reform" is, or may be, realized, and let us take into consideration only the economic and structural essence itself of the phenomenon of parcellisation.

The transfer in the distribution of land property from large estates to peasant farms is a complex process whose economic subject-matter is reduced to a threefold phenomenon:

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<sup>1</sup> The lack of necessary differentiation in the idea of "land reform" leads Miss Warriner astray. She sometimes draws conclusions about the influence of "land reform" on decapitalisation, which could at best be applied to only some forms and modes of its execution (neighbourhood parcellisation with the aim of enlarging small farms) and which have moreover a rather limited scope of realizable possibilities.

a) diminishing of the scale of the estate

b) a change of the quantitative ratio of the factors of production: land, capital and labour, and

c) a change of the type of economy from capitalistic to non-capitalistic i. e. a change of those fundamental elements of managing which are the aim of the producing activity, economic calculation and the limits of production connected with it <sup>1</sup>.

Other features distinguishing larger estates from peasant farms such as a) the direction of production (of a more vegetable type in larger, of an animal-breeding type in smaller farms) and b) the quantitative size of production, now greater and then smaller in this or that type of farms, are derivative phenomena in relation to the above mentioned basic characteristics of carrying on farming on larger or smaller farms.

A) From the point of view of the scale of the farms there comes into play the same law of diminishing costs which in industry is the source of technical concentration and which in agriculture, though due to well-known reasons does not lead to concentration, yet keeps up the vitality of larger estates in spite of considerably higher individual costs of labour <sup>2</sup>. This problem of the *optimum* scale is not taken into consideration

<sup>1</sup> The authoress distinguishes the two first processes but passes over in silence the change of the type of economy.

<sup>2</sup> The optimum scale of the working unit in agriculture — in the measure in which in concrete individual cases it does not depend on individual (accidental) qualities of the entrepreneur — is in connection with the whole association of objective moments i. e. natural and market conditions and conditions of the situation. No doubt in relation to every individual, theoretically isolated moment conditioning a certain type of farm (area and direction of production), this law of the optimum scale should express itself in the topographical localisation in accordance with Thünen's scheme. However the great cominution and the overlapping of the natural conditions (the soil, inclination of the lots and qualities of the climate) and of conditions resulting from the situation in connection with a variety of types and directions of production (a great amount of so-called agricultural produce and branches of animal production which in a certain measure form separate lines of production) may explain the coexistence of various types of areas as the result of the influence of the economic law of the optimum scale of the working unit.

On the other hand the law of increasing costs and intensification (the

by the authoress; she examines only the problem of the *minimum* of the scale of area necessary for securing the proper relation between "land" and the capital connected with it in such ratios in which it is actually found in the farms. She is not concerned with the problem of adjusting the size of the farm scale to a certain optimum corresponding to the specific natural and market conditions and conditions of the situation, but to those areas of arable land which guarantee a proper utilisation of the capital goods already invested and active in agriculture.

Here the first place is occupied by the building capital. Starting from the assumption that the volume of this kind of capital goods corresponds more or less accurately to the needs of production in the hitherto existing farm scale it is easy to reach the conclusion that the division of farms (both larger and smaller ones) when maintaining the general intensity of production on the existing level — causes a partial uselessness of those capital goods, a fact which has naturally a decapitalising effect<sup>1</sup>.

On the other the minimum unit of the draught power

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optimum ratio of capital and labour to the land, which is law in agriculture) checking the competitive quality of larger estates in the commodity market and the specific difficulties of concentration processes in agriculture in view of their dependence on the *previous* liquidation of smaller units of production, makes one doubt the ability of the law of optimum to transform the historically developed agrarian structure. This doubt is particularly felt if one considers that in the expansion of small scale agriculture the moments of decisive importance are of extra-economic and irrational, in fact of a psychological and emotional nature.

This, however, does not mean that from the point of view of the criteria of economic rentability the scale of production in agriculture under given concrete conditions is indeterminate and indifferent, that both types of production i. e. on small and large farms — are in every situation equivalent.

Erroneous is also the supposition that there did not exist a level common to both types of a social and economic estimate and that one could speak separately of the optimum scale in relation to large farm production and separately in relation to peasant farms.

Social and economic rentability is the common measure determining the economic value of the given type of production as well as the proper or improper direction of investing capital in production of this type (the problem of decapitalisation as a "misdirected investment").

<sup>1</sup> The authoress unjustly leaves out of consideration, as insignificant, farming equipment such as machinery and live stock, breeding installations,



normal in agriculture i. e. a horse, requires a certain minimum area of the farm for being rationally utilised.

A very small, undersized farm is excessively burdened by the expense of keeping a horse. The horse on a small farm — according to a well-known saying — devours the owner. Hence also arises the postulate of increasing the area of small farms to the limits of an optimum utilisation of the horse as the smallest, indivisible quantum of a capital good, while other forms of capital, as being more divisible, can be more easily adjusted to the scale of the magnitude of the remaining factors of land and labour.

By means of such theoretically correct reasoning Miss Warriner reaches the conclusion that parcellisation on the one hand causing a worse utilisation of the building capital of larger properties, on the other improves the utilisation of draught capital of smaller farms. Land reform — as far as developing undersized farms is concerned — may therefore have no decapitalising effect (in the sense of a partial destruction of the utility value of fixed capitals).

This conclusion, at least within the range accepted by the authoress, is erroneous. First of all it is clear that this equilibrium between the negative effects of the shrinkage of the area of a larger estate and the favourable effects of increasing the area of smaller farms concerns only the case of neighbourhood parcellisation with the object of enlarging undersized farms adjoining the estate. For only in this case the enlarging of small farms does not involve the consumption of new capital dispositions (i. e. the expenses of erecting new buildings and introducing new equipment). The increasing of farms by means of neighbourhood parcellisation is also indubitably that sector of the programme of "land reform" (in the narrow sense) which would exercise the most favourable and the least unfavourable influence from the point of view of decapitalisation.

But also in this sphere one should beware of too schematic solutions resulting from one-sided theorising. In contact with reality they break down over the variety of concrete situations,

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agricultural industrial plants and such like capital goods which by diminishing the land area connected with them are deprived of their full scale of producing abilities and are doomed to partial uselessness.

as the substitution of horses by a different drawing power (oxen-cows), frequently encountered in the West, and vice versa at the possibility of a profitable utilisation of the horse outside the farm.

On the other hand the problem of the economic value of undersized farms cannot be solved exclusively in the plane of technical and agrarian problems. One should bear in mind that the very fact of the origin and existence of agriculturally self-sufficient farms proves that there exist earning possibilities outside the farms, for only under such conditions the process of dividing the farms below the "consumption standard" (i. e. the standard of supporting the family on the farm earnings) was possible.

In other words it can be stated that every farm not self-sufficient agriculturally arose as an enterprise which partly depends on earnings from production and partly on labourers' or industrial workers' incomes and that the peasant family holding such a farm belongs to the professionally mixed type so valuable from the social point of view<sup>1</sup>. The horse on such a farm is only in part a productive good, while in part it is a durable consumption good.

These remarks suffice to show how unsatisfactory it is to say that land reform has no decapitalising effect from the point of view of the possible increase of the rentability of the ploughing team in a farm enlarged to a rational size.

In order to avoid unproductive consumption of capital dispositions, unavoidable in the action of enlarging farms by means of settlement parcellisation one should look for means of making small farms independent above all by more strongly emphasizing the division of work between larger and smaller farms and the specialisation of small farms in cultures requiring most manual labour (sugar beet, tobacco, vegetables) as correspon-

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<sup>1</sup> A tendency to increase these farms to proper size would be perhaps socially justified if it were not to be feared that instead of eliminating wage earners from an area where there are possibilities of existence there will be only brought about a sharp separation between the farmer possessing sufficient land and the landless proletariat. Hence the enlargement of farms should be applied only where the stream of an additional extra agricultural income is neither sufficient nor sufficiently stable and durable.

ding to the basic character of small scale farming i. e. "l'abondance et l'irréductibilité de la main d'oeuvre familiale"<sup>1</sup>.

B) The breaking up of larger estates is not only a change in the scale of farming production but (as is rightly stated by Miss Warriner) a change of the mutual quantitative ratio of factors of production — labour, capital and land.

The quantitative ratio of labour to land increases. Why? Besides technical moments, the objective foundation of this phenomenon is the already recorded abundance and inelasticity of family labour, while the subjective foundation is a greater inclination to work on one's own farm, and therefore a lower estimate of the hardships of labour and the reward demanded for it.

The peasant's own cost of labour on a small farm is in so far cheaper than the cost of labour in a larger enterprise as the minimum cost of living of a member of a peasant family (and even only the measure of the increase of consumption of a working in relation to an idle man) is lower than the wage of the corresponding category of farm labourers.

The higher and the more inelastic the wage scale in agriculture, the greater is the favourisation of small farms in respect to this fundamental factor of production in agriculture, viz. labour.

A lower intensity of labour on larger farms is therefore, under contemporary Polish conditions partly a natural phenomenon, resulting from irrational extra-economic motives and partly an artificial one connected with the level and inelasticity of wage scales.

In so far as a general reduction of this scale does not seem

<sup>1</sup> To this division is opposed until now the character of "natural" economy prevailing in peasant farming (a very restricted binding up of these farms with the market and commodities exchange). The more complete this division the stronger the complementarity of various farm sizes in terms of the general agricultural production of the country will manifest itself.

In connection with this the tendency to uniforming the farm sizes to "dissect the country into a uniform chequer board" as is figuratively expressed by Mr. Joseph Poniatowski in his book *Overpopulation* is misdirected. "The multiplicity of farms and their mutual interaction — wrote Bujak in his study on improving the agrarian system in Poland — determines the richness of organic life in general and of social life in particular and secures a durable and strong development of the whole system, as it contains in itself more pledges for a future development."

advisable, the introduction of a variable wage scale i. e. the reduction of the prevailing scale in relation to every surplus number of hired labourers (in relation to the quantity normal for the given farm) would be an expeditious means of reducing rural unemployment by increasing the population capacity of larger farms based on capitalistic calculation.

But even the extenuation of the artificial legal considerations deepening the differences in the intensity of labour between large and small farm production, would not equalize those types of production with respect to the labour they can directly absorb.

Due to this consideration, parcellisation seems to be an expedient means of diminishing unemployment where the tempo of the increase of labour supply exceeds the tempo of accumulation, and the low social efficiency of labour has its source in a too low quantitative ratio of capital to labour.

Some economists express the view that the low rentability of smaller farms (which is a general characteristic of small farm agriculture if the value of labour is calculated according to its market prices) predetermines the low value of the small farm from the point of view of the national economy, for rentability constitutes the criterium not only of calculation in private enterprises but also of the socially economic estimate both of separate enterprises and entire branches of production. The difference between these two points of view depends, however, on a different estimate of labour.

Under conditions of an over-supply of labour (whether static or even only dynamic) the so-called substitutional value of the labourer falls to zero while the "economically superfluous man" has from the point of view of exclusively economic criteria no positive value but a negative one — he burdens the national economy by the expense of the unemployment dole. In such conditions the surplus of labour active in small enterprises should not be calculated — from the point of view of the economic rentability — according to the wage rate of employed wage-earners, but according to its very low substitutional value. In other words, under conditions of overpopulation, this surplus of labour should be regarded as a palliative of the unemployment dole replaced by the admission of the unemployed population



to those kinds of employment where by their additional work they may gain the minimum indispensable means of living.

These arguments, so strongly in favour of parcellisation under conditions of an oversupply of labour in relation to capital and land, call, however, for considerable reservations. Parcellisation (with the exception perhaps of neighbourhood parcellisation in order to increase farms to proper size) increases the quantitative ratio to land not only of labour but also of capital i.e. the very factor of production which is in the minimum.

What is worse, capital which parcellisation draws from the market is used by it wastefully in a quite unprofitable way (erection of buildings, installation of wells, production and purchase of relatively unproductive small agricultural tools and machinery and such like investments).

Miss Warriner admits that the comminution of large estates is (or was) a form of investing savings in a less profitable way than investing in the market, but she considers the process of this constant partial wasting of this factor of production — the most valuable, as it is the rarest — to be unavoidable when the increase of capital does not suffice for industrialisation.

I am unable to follow this reasoning. What does the authoress mean when she says that there is not enough capital? What is her measuring scale? Has she in mind the absorption by the highly mechanised manufacturing technique of the whole natural growth of the rural or the whole surplus of the urban population? Does she not take into consideration the wide possibilities of the substitution of labour for capital even in manufacturing industry, does she not know forms of production intermediary between a highly capitalised enterprise and a peasant farm, does she forget the development of manufacturing on a small scale, trade or indoor work, combining great amounts of labour with relatively small portions of capital (adjusted to the conditions of the internal capital market?)<sup>1</sup>.

In reality, in the light of our preceding remarks, the question of the reasonableness of "land reform" from the point of view of capitalistic conditions and capitalisation processes is

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<sup>1</sup> What are the sources of this strange economic fatalism which just because the country is poor in capital makes the authoress postulate the investment of this capital in an unprofitable way?

a problem of figures and is reduced to the question whether additional capital invested in agriculture which is small in relation to big farming, cooperating with the whole surplus of labour possessing a very low value or no substitutional value at all (and therefore from the social and economic standpoint inexpensive) will be able to yield interest according to the market rate normal for the given time and place.

Let us e. g. suppose that 1000 hectares of a bigger landed property with a capital of 500.000 zł invested in it (in the form of buildings, machinery and live stock) yields a net income of 25.000 zł. Let us further suppose that in case of parcellisation this area requires a further 500.000 zł to be invested in it (new buildings, wells, plantations, inventories) after which, using larger quantities of superfluous and, from the socially economic stand-point, gratuitous labour, returns an income of 35.000 zł.

This 10.000 surplus income must form the equivalent of the additionally invested capital. If 5 percent is a much lower rate than the profit rate in the new investments either agricultural within the hitherto existing farm scale, or industrial, and in other lines of productivity, then the consumption of capital dispositions for providing smaller farm enterprises with capital goods indispensable for a small scale utilisation of land would be (within the limits of our example) a decapitalisation process, a move injurious from the standpoint of social income and the objective conditions of capitalisation. Doubtless a cheaper and economically more rational way of securing the living possibilities of the population "superfluous" from the standpoint of the demand for labour, would be in this case its maintenance by means of public relief.

The figures of our example are of course arbitrary. The question must be asked whether, and in what measure, they are an illustration of the actual conditions?

In my study entitled "Les limites économiques de l'intensification des petites et des grandes exploitations agricoles"<sup>1</sup>. I proved, on the basis of an analysis of the figures contained in the books of accounts supervised by the Swiss *Bauernsekretariat*

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<sup>1</sup> Paris. Les Presses universitaires de France, 1925. See also "The economic limits of the intensification of larger and smaller farm enterprises" (Polish), *Ekonomista*, vol. I, 1926.

at Brugg, that the point of the satiation of land with capital within the law of variable incomes of agricultural production (curve of diminishing and increasing costs) corresponds in smaller farms to higher absolute input rates. This extension of the phase of increasing incomes (making possible larger inputs on a small farm enterprise rather than on bigger estates) does, however, not mean the possibility of obtaining a greater profit for a unit of surface in relation to active capital.

Smaller property, representing in comparison with larger estates a broader investment for capital, does not form a more profitable investment; a smaller farm does not yield an absolutely higher profit, but yields the same income only at a stage of higher intensity.

The amplitudes of the oscillations of income are, as the process of the intensification of production progresses, greater on a small than on a larger farm, but the upper limit to which this income tends is the same.

Consequently the difference between a larger and smaller economic unit is only founded on the fact that a larger unit reaches these limits already at a medium intensity i. e. with medium rations of capital and labour, while a smaller unit does so only at a very great input. In other words, in order to be profitable small property must show a greater intensity than large property.

From the interpretation of this phenomenon in connection with the fact that productivity of capital goods <sup>1</sup> diminishes as the farm size decreases, it follows that in relation to a unit of surface a small farm can yield a net income not inferior in rentability to bigger farms, but in relation to the input, to the active capital, this income must of necessity be lower.

On the other hand capital input in a small farm seems the more important as it improves the naturally unfavourable quantitative ratio between the factors of production. Hence follows the conclusion that in order to be profitable a small farm must be rich in capital, because otherwise its rentability in relation to the general input is very low.

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<sup>1</sup> Wasting of capital within small scale production is a phenomenon analogous to wasting land for yards, walks and paths within the area of smaller landed properties.

In other words, in order to be profitable a small enterprise must be intensive. An extensive small enterprise is to a high extent irrational; it is both from the point of view of private enterprises and of social economy unprofitable; it is an uneconomic manner of using the land, capital and labour of the society<sup>1</sup>.

The economic value of small enterprises is therefore dependent on two cardinal conditions: a) the abundance and hence the cheapness of capital and b) on the degree of the propitiousness of the natural conditions and conditions of the situation which a particular enterprise enjoys and which influences the level of the rational intensity.

As far as the first condition is concerned, it is clear that the cheaper the capital in a given country, the lower its substitutional value, the smaller the relative loss resulting from its particular unproductivity in a small enterprise. On the contrary, the poorer the country with regard to capital, the more important is a faster, nearer attainment of its optimum ratio to other factors of production (as it exists on a larger farm enterprise).

The second condition concerns the fact of making the absolute level of rational intensity dependent on the natural conditions of the enterprise (mainly the kind of soil and climate) and on the economic conditions (mainly means of transportation and its position with respect to centres of manufacture or the sale of produce).

It should be stated that the more propitious these conditions are, the higher can be the intensity, because the optimum of intensity corresponds to inputs of labour and capital which are higher.

These are the conditions in which the competitive ability of smaller enterprises as compared with larger ones increases, for the higher the admissible rational intensity is, the weaker appears the partial unproductivity of capital and

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<sup>1</sup> This results both from the greater amplitude of the oscillations of income in relation to an increase of input in a small enterprise, and from the fact that a small farm reaches the optimum of intensity only at a very high level of intensity, while a larger enterprise reaches this optimum already with a medium intensity.



the superabundance of labour, which characterizes smaller enterprises.

On fertile soil and with developed means of transportation and conditions of exchange, a smaller farm is a rational type, while on barren soil, in bad climate or with an unfavourable situation with respect to the market, small scale production is contradictory to the application of the economic principle to production.

One must admit that with respect to both above mentioned elements (abundance of capital and favourable natural conditions and conditions of the situation) Poland and Eastern European countries present for the development of small farming much worse conditions than the west of Europe<sup>1</sup>. This is a conclusion contradictory to the results of the reasoning of Miss Warriner.

C) There remains to be mentioned the third and last process of a general character, a certain form of which is the breaking up of large estates. It is the change of the type of economy from a capitalistic to a non-capitalistic one<sup>2</sup>.

The formation of non-capitalistic farm in place of the former capitalistic farm enterprise is reduced to a shifting of the objective criteria defining the level of intensity and the limits of production towards subjective criteria.

For the intensity of production and its magnitude on a peasant farm depend on the point of equilibrium of the subjective "disutility" of the peasant's own (family) labour and the subjective "utility" of consumption which is the result of that labour.

The above remarks explain why in identical objective conditions there exists such a great disparity in the economic efficiency and productiveness of particular smaller farms.

This productiveness stands in reverse ratio to the high estimate of the hardship of work (laziness) and the primitiveness

<sup>1</sup> To this, still another consideration must be added. The "stock-breeding" tendency of small scale production connected with an immense loss of power, food, i. e. calories, when making over vegetable into animal products, finds more suitable conditions of development in wealthy countries with a high standard of living of the broad masses of the population.

<sup>2</sup> An analysis of the essence of this phenomenon forms the subject-matter of an excellent study by Tshayanov on the science of peasant farming.

of wants. Whereas the greater the labouriousness, the stronger the will to work (the ability of forcing oneself to execute a task rationally decided on) and the greater the scale of wants, the greater, under given objective conditions, will be the input of work and the productiveness of the farm.

This explains the fact why undersized farms, relatively most strongly burdened per unit of surface by the consumption wants of the peasant family achieve, in spite of faulty working conditions, a higher productiveness per hectare than proper-sized farms.

It may therefore be expected that the enlarging of undersized farms to proper size by means of the dividing up of bigger estates, creating conditions in which the satisfaction of a given scale of wants (corresponding to the peasant standard of living) is achieved by means of a smaller economic effort, will weaken the intensity of labour and the net income per unit of surface.

The enlarging of farms may also, while improving the objective conditions of the capitalisation of small farmers, at the same time weaken its subjective motives.

Miss Warriner declares that it is an advantageous feature of "land reform" from the point of view of social economy that it directs the dispositions of the Polish capital market to that branch of production in which the share of labour is in relation to capital the highest. In the light of our remarks this actually is a disadvantageous aspect of the "reform", for the capital invested in this way almost entirely fails to increase the equipment of agriculture taken as a whole, — it does not mean a new conquest of man over nature, it does not potentiate man's forces in the sphere of the rational exploitation of land.

Miss Warriner further states that the transfer of land into the possession of peasants will increase the size of investing in the direction of the intensification of agriculture. But will this really be so?

Capitalist calculation by which larger estates (based on hired labour) are guided possesses the quality of constantly adjusting the degree of the intensity of production to the general conditions existing at a given moment and changing together with the price level, with technical progress and with the oscillation of market interest rate.

The processes of capital intensification of small farming as a rule are not subject to these regularities, but they are subject to a whole range of subjective estimates, different in every farm, in which the dominant rôle is not played by the objective price level, but by the difficulty of work, not by the rentability of applying technical devices and of the intensification of production but by the satisfaction of personal wants in conformity with the standard of living accepted in the given social group.

To the present day almost exclusive stimulus of capitalisation with small farmers was the desire of increasing their farms by the purchase of land. It would be an interesting and important historical problem to study the directions in which the capital dispositions transferred to the hands of the owners of the divided land, were dispersed through the economic organism of Poland.

It should be supposed that they partly served the intensification of large scale agricultural production, partly they were probably invested in urban real estate, in industry and business agencies.

Whether, and in what measure in case the craving for land were satisfied, or at least after the fast execution of the dividing up of the complete "supply of land for the purposes of land reform" pecuniary resources will be accumulated in the country and how they will saturate Polish economic life — is difficult to foresee.

It seems, however, probable, particularly in the case of the indispensable introduction of restrictions in the divisibility of small farms, that peasants will capitalise chiefly for family payments and that the brothers and sisters paid off by the heir i. e. the sole holder of the indivisible farm, and equipped by him with a small capital will perforce seek investment for their capital in extra-agricultural occupations, above all in small town trades and commerce.

This would be a reversal to just those extra-agricultural investments which Miss Warriner wishes so much to avoid, as she considers only agricultural investments as proper for Poland and Eastern European countries.

But this direction of investments — contradictory with her conception — would be reached after previously wasting immense amounts of capital and stopping for a number of years the movement of the fly-wheel of Poland's economic dynamics and the development of the material welfare of the population.

I wish to add one last remark <sup>1</sup>. In my article I discussed only the material welfare of the population. I know that welfare is a state whose components are not only material but also ideal elements. These "imponderabilia" are, it seems, very important when in the contemporary psychology of the Polish peasant they outweigh the balance on which lie much scarcer means of satisfying wants <sup>2</sup>.

These are considerations which cannot be passed over by social policy. But within a strictly economic analysis we cannot accept every natural tendency of individuals or groups with all that it implies as the soundest manifestation of the group instinct, as the expression, indispensable under given conditions, of a tendency to the maximalisation of welfare.

Such an attitude could easily lead us to the conclusion that from the point of view of society both the direction and the magnitude of production and consumption are indifferent, for in them is manifested the range of estimates, proper for the given society, of the material and non-material elements of welfare.

This ultra-liberal standpoint would be indubitably erroneous. Economic policy must care for an abundant and durable stream of goods.

I am afraid that "land reform" will stop up many a source which would be able to supply this stream.

*Ludwik Górski*

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<sup>1</sup> I do not discuss the part of Miss Warriner's paper which deals with the backward evolution of the fall of income per head of population. I do not share the opinion that this case occurs in Poland, and therefore considerations on this subject would be outside the scope of an important and seasonable problem of Polish policy.

<sup>2</sup> The living conditions of a labourer employed on a large estate and receiving allowance in kind correspond to the degree of wealth of an independent farmer possessing 6 hectares.



## II

I am afraid Miss Warriner is mistaken when she considers me as a scholar representing the opinion that any land reform whatever means in Poland decapitalization.

Contrary to many opponents of the reform I have always expressed the view that any agrarian reform must not necessarily have bad effects on the process of capitalization, and that under certain conditions it may lead to just the opposite. Some of these conditions have been briefly mentioned by Miss Warriner in the conclusions of her paper. And it is only a pity that Miss Warriner did not define them more extensively, as some misunderstandings caused by her paper could have been avoided.

I find no difference between my own and Miss Warriner's point of view as far as criteria of efficiency are concerned. For there does not exist in my opinion any single criterion of efficient farming and efficient farm sizes.

Discussing the latter question in the pages of "Berichte über Landwirtschaft" I made comparisons between farming conditions in America and in West or Central Europe and those prevailing in Poland. These comparisons led me to the conclusion that whereas in the United States it is labour, in West and Central Europe it is land that may be regarded as the minimum factor upon which the development of agricultural production depends.

In Poland, I stated, things appear somewhat different. The demand for capital is relatively greater than the demand for land. Thus not land but capital must be regarded as the minimum factor in Polish farming. And that is why, lacking capital investments, agricultural production remains in Poland on a very low level in spite of comparatively high labour inputs.

The lack of capital is manifested by low figures of livestock productively engaged in Poland. It may be easily proved that while America is leading in output of agricultural production per labour unit, West or Central Europe does it per land unit. Poland on the contrary, showing low output figures both in relation to labour and to land inputs, yields the highest outputs per livestock unit.

What has been said above is of course by no means in

opposition to Miss Warriner's statement. It rather backs her views, that further capitalization is compatible with land reform. But how far the conditions go under which the capitalization process and land reform may proceed along one line — has not been discussed.

Miss Warriner seems to be very well aware of the fact that land reform would remain futile unless accompanied by a policy of parallel social investments the absence of which forces agricultural producers to keep up a high degree of self sufficiency. She even points out the development of means of communication as an investment necessary to prevent land reform from being an onesided investment. And she certainly is not mistaken in this respect.

But there remains a much more important investment to be made which Miss Warriner forgets, i. e. education. The lack of proper education is to a high degree responsible for the two types of farming still existing in Poland side by side. There are deep reasons for the fact that gentleman farms, descending obviously from an obsolete social order, could survive until the present day. Since the abolition of serfdom they have proved to be pioneers of commercial farming. And even such a convinced supporter of a radical land reform as myself must recognize that a too rapid doing away with them would result at least in an increase of the strong selfsufficing sector and in a weakening of the existing marketing chains. And land reform as one can imagine cannot of course be intended to help simply an increased number of population to stick to the land and to farm on the basis of self sufficiency.

This seems to be neglected by Miss Warriner. Moreover, she does not pay any attention to the fact that the rapid growth of population together with a limitation of emigration and export possibilities creates for Poland the problem of developing town businesses and of transferring to them a part of her country population. And though it may be true that from a purely economic point of view the rapid growth of country population cannot be blamed as such for affecting the accumulation of capital, any unprejudiced observer must admit that it nevertheless does affect it. It does so by virtue of sociological rather than economic reasons.

Under the conditions prevailing in Poland a rapid growth of country population works in an exactly opposite direction to the progress of education. It strengthens the position of the self sufficing sector. Thus in the end it indirectly affects the accumulation of wealth.

I further should like to draw the attention of Miss Warriner to the fact that the real trend in Polish landownership has not been quite correctly represented in her paper. *Latifundia* were in prewar times not at all subject to a process of attrition. This statement holds true for the middle sized peasant farms which, along with smaller types of gentleman farms operated by their owners themselves, were constantly decreasing in number and area. They were decreasing in favour of the small holder. This movement working towards a sweeping away of the middlesized type might not have been quite free from an influence on the part of the ruling foreign Powers which were by no means interested in strengthening the economic structure of the Polish people. But this certainly was not the main reason. Neither was it a greater efficiency of the small holdings.

Sociological conditions such as customs and laws of succession must be studied in order to understand the movement. They were in favour of dividing efficient farms into equal parts among the children. Owing to these customs even some effects of land reform which under different conditions might seem unquestionable, such as rearrangement and increasing the area of small holdings, are already being destroyed.

Nobody questions the usefulness of a reasonable land reform. But the problem which confronts our country is this: May we look upon land reform as upon a means of satisfying the needs of the present generation only?

Generations come and go. But a land reform is an investment which finds its justification in the creation of a landownership structure most suitable for developing natural resources of agriculture in the long run. If it does not, it fails. This idea can hardly be brought into harmony with a land reform conducted on the very primitive lines of a pure land division. These may be rather identified with simple methods of an equalization of social income.

Such attempts at division are occasionally backed by

pointing out some efficiency figures. But efficiency figures change. A type most efficient today may prove entirely inefficient tomorrow. Thus efficiency figures are not apt to guide a real statesman in choosing the ways of a land reform. And it will be the broad aspects of the future development of the nation that will be primarily taken into consideration by him.

*Stefan Schmidt*

### III

I agree with Miss Warriner as to the most important views about the probable effects of the land reform in Poland. The possibility of employing more labour, unemployed as yet, is proved quite convincingly. I have some doubts as to other points, not closely connected with main thesis of her paper.

1. Miss Warriner expresses the opinion that "it is impossible to find a basis for the theory that population growth can cause a retrograde development". She states explicitly that population growth, when it goes on at a constant rate, is susceptible to forecast and the expected increased marginal productivity of capital (when labour supply is expected to increase) must cause an appropriate capital accumulation of such a magnitude as to prevent the national dividend per head from declining. This opinion is based on the belief that every expected rise in the rate of return from capital must necessarily cause a capital accumulation large enough to keep this rate on a constant level or to lower it again to the former level. Is this really so?

We ordinarily assume the rate of population growth to be a variable quite independent of other economic data — any possible dependence has an extra-economic character. The response of the saving class of the community to an expected rise in the gains from capital is supposed to be of such a character that a rise in the rate of return is accompanied by a rise in the rate of capital accumulation per unit of time. (There are many economists who deny any connection between the rate of return from capital and the rate of capital accumulation, e. g. J. M. Keynes). I do not see why the rate of saving should be necessarily so related to the rate of population growth as to keep output per head stable — the anticipation of future wants or of increased gains from capital is not sufficient to secure this.



We can only state that when population increases, savings increase, it is by mere chance that the two rates of increase would be so related as to provide an output per head equal or larger than before.

The possibility of a declining output per head is even greater when we assume there are some other scarce factors of production, e. g. land or natural resources, the returns of a proportional growth of population and capital equipment then diminishing. Miss Warriner does not admit that the marginal productivity of capital decreases when the amount of capital increases, it seems to me, however, that the existence of scarce factors would probably corroborate an opposite thesis.

2. A reduction of income per head, and especially of small incomes evokes a strong tendency to divide property in order to equalize the economic position of different classes — the in — equality being much less felt when the poorest class is relatively well situated. The process of dividing large estates has several economic consequences mentioned by Miss Warriner, but its scope as it is felt by the rural population in Poland is an equalization of the economic position of the peasants with that of the estate owners. This aim is being realized because the price of land acquired for the purposes of land reform is much lower than the market price. (The latter is excessively high in relation to the rentability of farm enterprises and reflects rather the security of such an asset). There is one possible effect of such an equalization, which has not been indicated by Miss Warriner. We know that a community showing greater differences in income distribution has ordinarily a greater capital accumulation, provided that the forecast of future wants is equal among the individuals and the differences in savings are due only to the differences in their incomes. Land reform would then cause a decrease in capital accumulation and, if we take the rate of population growth for granted, could evoke or accelerate a backward movement. Such an event is, at least theoretically, possible. The community, however, does not consist of such homogenous individuals and the transfer of income sources from the large proprietors to the peasants can, and in my opinion will, nevertheless, cause an increase of capitalization as the propensity of the peasants to consume is *ceteris paribus* much lower than

that of the estate owners. The problem is a quantitative one and, given other data, equally an opposite opinion might be true.

If we assume that savings will not diminish as the differences of incomes will be smaller than at present, we must also take into account the greater preference of the Polish peasant for liquidity. In contrast to the big farmer he is inclined to keep relatively big cash reserves, and owing to sociological and institutional conditions he hoards them, not unlike the French peasant, in coins and banknotes. A rearrangement of income sources can, in connection with this fact, cause disadvantageous disturbances in economic life. I suppose that such a change in the velocity of money circulation can be neutralized by an appropriate banking policy.

I have confined my remarks to the proper subject of Miss Warriner's paper; the examination of her interesting point of view about diminishing returns from capital would take too much space and would not fit into the present discussion.

Włodzimierz Hagemejer

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## Streszczenie

### *Reforma rolna i dekapitalizacja*

#### I. Ludwik Górski

1. Autor wysuwa zastrzeżenia zarówno w stosunku do metody, jak i wniosków p. Doreen Warriner<sup>1</sup>. Jeżeli uznać, że naturalna ewolucja z koniecznością prowadzi do zaniku większych gospodarstw rolnych, to ocena reformy rolnej sprowadza się tylko do rozpatrzenia, czy przyspiesza ona dekapitalizacyjny, lub wzmagający kapitalizację wpływ tego procesu.

Zagadnienie teoretyczne polega właśnie na ustaleniu, czy parcelacja stwarza korzystne warunki dla przyrostu kapitału. Rozwiązanie tego zagadnienia wymaga analizy prywatnej i społecznej rentowności dużych i małych gospodarstw rolnych. P. Warriner — zdaniem autora — wykonuje skok logiczny,

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<sup>1</sup> por. *Land Reform and the Problem of Capitalisation* (Studia ekonomiczne, III, 1936).

przechodząc od rozpatrywania tej kwestii do stwierdzenia, że „reforma r. przyspiesza tylko proces, który w każdym razie musiałby zajść“.

2. Na to, żeby stwierdzić wpływ reformy r. na kapitalizację, należy ustalić, o jakiej reformie r. mowa. Inne skutki wywrze np. „parcelacja sąsiedzka“, a inne osadnicza, nadzielająca ziemią bezrolnych. Inaczej wpłynie reforma r. ograniczona do kontrolowania przez państwo cen i ruchu parcelacyjnego, aniżeli radykalny przymus sprzedaży ziemi. Obiektywne i subiektywne czynniki akumulacji kapitału ułożą się rozmaicie zależnie *a)* od zakresu i środków interwencji, *β)* od konkretnych form ustroju agrarnego, które wynikną ze zwiększenia udziału w nim małych gospodarstw.

3. Parcelacja wywołuje następujące skutki gospodarcze: *a)* zmniejszenie skali przedsiębiorstw rolnych, *β)* zmianę stosunku ilościowego ziemi, kapitału i pracy, *γ)* zmianę typu gospodarki z kapitalistycznej na niekapitalistyczną, tj. zmianę podstaw kalkulacji, granie produkcji itp.

Inne cechy, odróżniające duże gospodarstwa r. od małych, to: *a)* produkcja przeważnie roślinna w dużych, a przeważnie zwierzęca w małych gospodarstwach, *b)* rozmiary produkcji większe niekiedy w dużych, a kiedy indziej w małych gospodarstwach. Te cechy wynikają ze scharakteryzowanych powyżej, zasadniczych różnic typu gospodarki dużej i małej.

A. Z punktu widzenia skali przedsiębiorstw rolnych prawo zmniejszających się kosztów działa tu także, jak i w przemyśle. Nie prowadzi ono wprawdzie do koncentracji produkcji, ale utrzymuje żywotność większych gospodarstw r. mimo wyższych kosztów pracy. P. Warriner nie rozpatruje problemu *optimum* skali przedsiębiorstwa r., rozpatruje tylko *minimum* pod kątem widzenia nie najwyższej w danych warunkach wydajności, ale tylko najlepszego użycia już inwestowanego kapitału.

Przeciwstawia tu p. Warriner stratę kapitału, wynikającą przy parcelacji z marnotrawienia kapitału folwarku, tkwiącego w budynkach gospodarczych, korzyści wynikającej z lepszego użycia inwentarza żywego (konia) w powiększonym gospodarstwie chłopskim. Stąd wyprowadza wniosek, że reforma r. nie będzie miała wpływu dekapitalizacyjnego. Ten wniosek jest zbyt szeroki. Można by go odnieść tylko do parcelacji sąsiedzkiej.

Ale i tu jest zbyt schematyczny. Istnienie i trwałość gospodarstw karłowatych świadczy o możliwościach zarobkowania poza własnym gospodarstwem, gdzie zarówno praca, jak także i kapitał (koń) rolnika znajdują zatrudnienie. Gospodarstwo karłowate należy do cennego socjalnie typu zawodowo mieszanego.

B. Parcelacja prowadzi do zmiany stosunku ilościowego pracy, kapitału i ziemi w rolnictwie. Wynika to przede wszystkim stąd, że praca w gospodarstwach r. dużych jest znacznie kosztowniejsza niż w małych, a to dzięki przekładaniu pracy na własnym zagonie nad pracę najemną w gospodarstwie folwarcznym, oraz dzięki sztywności taryf płac robotników rolnych. Uelastycznienie tej taryfy wzmogłoby zatrudnienie pracy w większych przedsiębiorstwach rolnych. Nie usunęłoby to jednak całej różnicy w cenie pracy na małych i dużych warsztatach r. W tych warunkach parcelacja wydaje się skutecznym środkiem zmniejszenia bezrobocia wiejskiego.

Jeżeli policzymy koszt pracy według płac, które osiąga w gospodarstwach większych, to małe gospodarstwa wykazują powszechnie niższą rentowność od dużych. Stąd niektórzy ekonomiści uważają gospodarstwa r. małe za mniej wartościowe z p. widzenia społecznego. Przy nadpodaży pracy jednakowoż „wartość zastępcza“ pracy spada do zera, a utrzymanie bezrobotnego obciąża gospodarke społeczną. W tych warunkach wartość pracy winna być kalkulowana wg. bardzo niskiej wartości zastępczej, a nie wg. poziomu płac w większych gospodarstwach r. Dopuszczenie zatem bezrobotnych do małych warsztatów r. może być uważane za namiastkę zasiłku dla bezrobotnych. Te argumenty za parcelacją napotykają na następujący szkopuł: parcelacja zwiększa na jednostkę ziemi nie tylko ilość pracy, ale i kapitału, więc czynnika występującego w Polsce w *minimum*. Ten kapitał, odebrany innym gałęziom produkcji, zużyty jest nierentownie (na budynki, studnie, małe narzędzia itp.). P. Wariner uznaje te lokaty kapitału za nieodzowne, skoro przyrost kapitału jest za mały dla rozwoju przemysłu. Autor kwestionuje to twierdzenie, wskazując, że brak miernika dla stwierdzenia, czy kapitału jest za mało dla uprzemysłowienia, oraz, że uprzemysłowienie może przyjąć rozmaite formy, w różnym stopniu pochłaniające kapitał.

Problem reformy r. jest zagadnieniem cyfrowym. Chodzi



o to, czy dodatkowy kapitał inwestowany w rolnictwo drobne, współdziałając z b. taną pracą, da normalne oprocentowanie. Takie obliczenie można zrobić, dodając do wartości ziemi rozparcelowanej świeżo inwestowany kapitał i rozpatrując w odniesieniu do obu tych wielkości razem rentowność obszaru po jego rozparcelowaniu. Jeżeli z ogólnego przychodu netto przypadnie na rzecz kapitału oprocentowanie niższe, niż przy innych inwestycjach, to ulokowanie tych sum było fałszywym przesunięciem kapitału i prowadzi do dekapitalizacji. W tym wypadku tańsze społecznie byłoby utrzymanie nadmiaru ludności zasiłkami publicznymi. Autor odwołuje się do swych prac „*Les limites économiques de l'intensification des petites et des grandes exploitations agricoles*“, oraz „*Gospodarcze granice intensyfikacji większych i mniejszych przedsiębiorstw rolnych*“, w których wykazał, że mimo iż w małych gospodarstwach r. opłacają się większe na jednostkę ziemi nakłady kapitału, aniżeli w większych, ale rentowność mniejszych gospodarstw nie jest wyższa, mimo zużycia większych ilości kapitału. W stosunku więc do jednostki kapitału rentowność ta jest niższa. Wobec zaś przeciążenia małych gospodarstw r. pracą, intensywność kapitałowa tych warsztatów musi być duża, w przeciwnym bowiem razie rentowność także i w stosunku do jednostki ziemi jest b. niska. Wartość ekonomiczna małych gospodarstw jest zatem tem wyższa a) im większa obfitość kapitału, b) im lepsze warunki naturalne i położenia (klimat, gleba i dobre komunikacje).

Przy występowaniu zespołu obu tych warunków zdolność konkurencyjna małego warsztatu rolnego wobec dużego i jego wartość społeczna wzrasta.

Polska w obu tych punktach ma warunki znacznie gorsze dla drobnych gospodarstw r. niż zachodnia Europa. Ten wniosek jest sprzeczny z konkluzjami p. Warriner.

C) Autor rozpatruje trzecią cechę procesu parcelacji tj. zmianę gospodarki rolnej kapitalistycznej na niekapitalistyczną.

Zmienia się dzięki temu kalkulacja i przesuwają się granice produkcji. Intensywność produkcji zależy w gosp. chłopskim od subiektywnego ocenienia „disutility“ pracy i „utility“ konsumpcji. Dlatego wydajność gospodarstw mniejszych bywa bardzo rozmaita. Gospodarstwa karłowate mają dzięki wysokiej ocenie utility konsumpcji wyższą wydajność z hektara od gospo-

darstw pełnorolnych. Można się stąd spodziewać, że upelnorolenie gosp. karłowatych osłabi intensywność pracy i zmniejszy dochód na jednostkę przestrzeni. Poprawa obiektywnych warunków kapitalizacji wystąpi bowiem łącznie z osłabieniem podmiotowej sprężyny przedsiębiorczości.

Skierowanie dyspozycji kapitałowych do rolnictwa nie podniesie, zdaniem autora, ekwipunku rolnictwa i nie wzmocni sił ludności w dziedzinie racjonalnej eksploatacji gruntu. Intensyfikacja produkcji w większych warsztatach rolnych jest kierowana przez kalkulację opłacalności, której warunki się zmieniają. Wyłącznym prawie bodźcem kapitalizacji w małych warsztatach jest chęć dokupienia ziemi.

Kapitały, które dostawały się do rąk dawnych właścicieli parcelowanych warsztatów rolnych, szły częściowo na zwiększenie intensyfikacji pozostałej przestrzeni, częściowo do przemysłu, handlu, lub ku własności nieruchomości miejskiej.

Trudno przewidzieć, czy będą akumulowane kapitały na wsi po szybkim rozparcelowaniu całego zapasu ziemi, przeznaczonego na reformę r. Wieś będzie zapewne kapitalizować głównie na splaty rodzinne, te kapitały lokowane będą prawdopodobnie głównie w rzemiośle i handlu małomiasteczkowym.

Te poza-rolnicze lokaty osiągnęłoby się po zmarnowaniu olbrzymich kapitałów i zahamowaniu na szereg lat rozwoju gospodarczego Polski.

Autor przeciwstawia się wreszcie uznaniu, że każda naturalna tendencja zbiorowości czy jednostek jest *eo ipso* wyrazem dążenia do dobrobytu. Wynikałoby stąd bowiem, że obojętny jest kierunek rozwoju produkcji i konsumpcji. Tego rodzaju ultra-liberalne stanowisko uważa autor za błędne. Polityka ekonomiczna musi dbać o obfity i trwały strumień dóbr. Autor wyraża obawę, że „reforma rolna“ zasypie niejedno źródło zdolne zasilić ten strumień.

A. H.

## II. Stefan Schmidt

Autor stwierdza, że wbrew opinii p. Warriner nie należy do tych, którzy uważają, że każda reforma rolna musi w Polsce prowadzić do dekapitalizacji. W pewnych warunkach może ona nawet zwiększyć kapitalizację. Autor nie sądzi, by można było znaleźć ogólnie rozstrzygające kryterium dla ustalenia wydaj-

ności gospodarczej gospodarstw rolnych o różnej wielkości. W swojej pracy, drukowanej w „Berichte für Landwirtschaft“ porównywał autor warunki rolnictwa w Stanach Zjednoczonych, w zachodniej Europie i w Polsce. Czynnikiem produkcji występującym w *minimum* jest w Stanach Zjednoczonych praca, w zachodniej Europie ziemia, a w Polsce kapitał. Dlatego mimo dużych nakładów pracy poziom produkcji rolnej w Polsce jest bardzo niski. Wyrazem tego jest mała wartość kapitału w postaci inwentarza żywego. Ameryka ma największe plony na jednostkę pracy, zachodnia Europa na jednostkę ziemi, Polska na jednostkę inwentarza żywego.

Te twierdzenia popierają tezę p. Warriner, że reforma rolna może być zgodna ze zwiększeniem kapitalizacji. Trzeba jednak, by były dokonane pewne inwestycje społeczno-ekonomiczne; niektórych z nich nie wymienia p. Warriner.

Taką inwestycją jest oświata. Przy jej małym rozwoju tylko większe gospodarstwa mogą być pionierami produkcji rolnej, skierowanej na rynek. Nawet przekonany zwolennik radykalnej reformy rolnej, jakim jest autor, musi uznać, że zbyt szybkie usunięcie większych gospodarstw rolnych doprowadziłoby do rozszerzenia produkcji rolnej, skierowanej na zaspakajanie własnych potrzeb, a osłabiłoby produkcję nastawioną na rynek. Nie może zaś być zadaniem reformy rolnej utrzymywanie ludności na wsi w samostarczalnych, małych gospodarstwach.

P. Warriner nie uwzględnia tego, że silny przyrost ludności przy utrudnieniach emigracyjnych stawia przed polską gospodarką zagadnienie rozwoju przemysłu i przeniesienie części ludności do miast. Przyrost ludności utrudnia kapitalizację, dzięki przyczynom socjologicznym, jeśli nie czysto ekonomicznym. Przyrost ludności utrudnia rozszerzenie oświaty i dzięki temu pośrednio przeszkadza akumulacji bogactwa.

P. Warriner nie zupełnie ściśle przedstawiła rozwój struktury agrarnej Polski. Latyfundia nie podlegały procesowi rozpadu. Rozparcelowywane były głównie majątki średniej wielkości, oraz średnie gospodarstwa chłopskie. Ten proces „polaryzacji“ był popierany przez rządy państw zaborczych.

Dla zrozumienia w pełni tego procesu należy jednak uwzględnić socjologiczne warunki takie, jak obyczaje i prawo spadkowe, które skłaniały do podziału gospodarstw. Wskutek

wpływu tych warunków już dzisiaj skutki przeprowadzonej reformy r. są częściowo unicestwione.

Nikt nie kwestionuje rozsądnej reformy r., nie należy na nią jednak patrzeć jako na narzędzie zaspokojenia potrzeb jednego tylko pokolenia. Utrwalenia wydajnego ustroju agrarnego nie można osiągnąć przez prymitywne rozdzielenie ziemi.

Tego rodzaju plany bywają popierane przez cyfry ilustrujące wydajność różnych typów gospodarstw rolnych. Ale cyfry te ulegają zmianom i najwydatniejszy typ dzisiaj, może być mniej wydajny kiedyindziej. Jedynie szeroka perspektywa przyszłego rozwoju narodu może być dla męża stanu właściwą wskazówką postępowania.

A. H.

### *III. Włodzimierz Hagemejer*

Uwagi autora stosują się jedynie do dwu problemów, poruszonych w artykule D. Warriner, a mianowicie problemu rozwoju wstecznego oraz wpływu podziału wielkich majątków na kapitalizację. Zdaniem autora zmniejszanie się dochodu na głowę może być wynikiem przyrostu ludności, o ile jest on szybszy niż przyrost kapitału. Sama możliwość antycypacji przyszłego przyrostu ludności i spowodowanej tym zwyczajki zyskowności kapitału nie może zapobiec spadkowi dochodu, gdyż akumulacja kapitału, nawet przyspieszona przewidywanymi większymi zyskami może pozostawać w tyle za przyrostem ludności. Istnienie rzadkich czynników produkcji i działanie prawa zmniejszających się przychodów zwiększają jeszcze możliwość wstecznego rozwoju.

Podział wielkich majątków oznacza przy dzisiejszym sposobie oznaczania ceny ziemi, częściowe wywłaszczenie i zmniejszenie się nierówności w rozdziale dochodu. Przy jednakowej dążności do oszczędzania u wszystkich musiałoby to ujemnie wpłynąć na kapitalizację. Autor sądzi jednak, że dążność do oszczędzania jest u chłopów o tyle większa niż u właścicieli wielkich majątków, że pomimo zmniejszenia nierówności kapitalizacja prawdopodobnie wzrośnie. Zwiększone oszczędności chłopów przy znanej ich skłonności do tezauryzacji mogłyby pociągnąć za sobą spadek szybkości obiegu pieniądza. Może temu jednak zaradzić odpowiednia polityka pieniężna.

W. H.



JERZY W. MASSALSKI

## DUMPING AND THE HOME PRICE

We define by dumping<sup>1</sup> the sale of commodities abroad at a price lower than that of the given commodity in the home market. In discussing our subject we shall only deal with permanent, so-called structural, dumping as a component of a certain state of economic equilibrium in opposition to temporary dumping resulting from selling out remnants of commodities abroad, conquering new markets and such like.

With free competition in the home market between enterprises of the same branch of business dumping cannot as a rule exist. Each enterprise is set to gain from its production the highest possible profit, therefore no producer will sell his commodity abroad at a lower price, if he finds purchasers at a higher price at home. The producer can not expect that he will increase his profit by diminishing supply in the home market so as to raise the home price, and selling the remainder of his commodity cheaply abroad. As long as free competition exists he cannot do so because when there is

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<sup>1</sup> Cabiati A., *Betrachtungen über das Dumping*, Zeitschrift für Nationalökonomie, VI, Wien 1935, Heft 1; Döblin E., *Theorie des Dumpings*, Jena 1931; Haberler G., *Der internationale Handel*, Berlin 1933; Pesl L. D., *Das Dumping*, 1921; Id., *Dumping*, Art. Handwörterbuch der Staatswissenschaften, 4. Aufl., Jena 1926; Szigeti P., *Monopolpreis und Dumping*, Zeitschrift für Nationalökonomie, VI, Wien 1935, Heft 4; Viner J., *Dumping: a Problem in International Trade*, Chicago 1923; Id., *Dumping*, Art. Encyclopaedia of the Social Sciences, vol. V; Id., *Memorandum sur le dumping*, Genève 1926; Wakar A., *Cena dumpingowa (The Dumping Price)*, Ekonomista, vol. III, Warsaw 1935; Yntema Th. O., *Influence of Dumping on Monopoly Price*, Journal of Political Economy, 36/6, Chicago 1928.

a great number of producers, even if one of them completely stops production, this will have no effect on the price. The place of a producer who withdrew a part of his supply from the market will be at once occupied by another who will offer the same amount of the commodity and will again lower the price to its former level. -

A monopolistic position of the producer in the home market of the exporting country is therefore the necessary condition of the dumping. Another one is tariff protection. Otherwise consumers will purchase commodities abroad at a lower price.

Excepted from the above-mentioned rule is selling abroad at prices lower than those in the home market, which is made possible by export premiums granted by the state or private institutions e. g. transport companies, producers of raw materials and such like.

The monopolist will obtain the highest profit when the marginal revenue equals the marginal cost.

$$\Phi'(q) = F'(q)$$

We mark the quantities sold by  $q$ , the revenue by  $\Phi(q)$ , the total cost by  $F(q)$ .

We assume that for a monopolist producer there arise export possibilities. These possibilities are based on the fact that certain quantities of the commodity of a given producer can at certain prices find purchasers in the foreign market.

Export will pay and will actually take place, if the amount of prices (volume) obtained from selling abroad will cover the additional sum of the costs of production of the exported quantity, which will occur when the foreign price is be higher than the marginal cost.

We assume at first that in the foreign market the given exporter has a monopolistic position. We assume this assertion as primary because then the situation in the foreign market will be analogous to the situation in the internal market.

For similarly as in setting the home price the exporter who has a monopolistic position in the foreign market will carry out a calculation of the price and quantity which he will sell and at which he will obtain the highest price in both markets.

If we mark the profit in the foreign market by  $g$ , the

foreign revenue by  $u$ , the price by  $p$ , the quantity by  $q$ , and the costs of production by  $S$ , then the highest possible profit of the producer obtained from export will be:

$$g = u - S$$

hence

$$u = \varphi(q)$$

and as we have already stated above

$$S = F(q).$$

We shall obtain  $g$  max. when

$$\varphi'(q) - F'(q) = 0$$

i. e. when

$$\varphi'(q) = F'(q)$$

Consequently the optimum price in the foreign market will arise with a quantity whose marginal revenue in the foreign market will equal the marginal costs.

The same equations will be applicable when we assume that the exporter has in the foreign market an intermediate position between monopoly and free competition i. e. in the case when there exists a greater number of unorganized producers contributing to the foreign market, while our exporter has so large a share in the general volume of supply that he can influence the price abroad.

The demand for the goods of the exporting monopolist whom we shall at present take into consideration in our analysis is not strictly identical with the general demand in the foreign market and differs from it above all by its elasticity.

In order therefore that a producer who has a monopolistic position both in the home and foreign markets obtains the greatest profit in both markets, the following equations are necessary:

$$\Phi'(q) = F'(q)$$

$$\varphi'(q) = F'(q)$$

and hence finally

$$\Phi'(q) = \varphi'(q) = F'(q)$$

The monopolist therefore obtains the greatest profit, when the marginal revenue in the home and foreign markets as well as the marginal costs of production equal each other.

We shall now discuss the influence of export on the price in the home market. In doing so we shall consider three groups of marginal costs of production i. e. constant, decreasing and increasing costs, because it is on their structure that this influence depends. For export causes an increase of production, which in turn brings about a change of the height of the producer's expenses.

We assume that in the internal market the optimum amount of production and sale is  $q_1$  because

$$\Phi'(q_1) = F'(q_1)$$

Now export takes place for

$$\varphi'(q) - F'(q) > 0$$

and that in the amount of  $q_2$ , because

$$\varphi'(q_2) = F'(q_3),$$

if we mark the volume of production by  $q_3$ :

$$q_1 + q_2 = q_3.$$

If we have to do with a proportional volume of costs or its combination with a constant volume of costs then the marginal cost is constant and consequently

$$F'(q_1) = F'(q_3) = b$$

hence

$$\Phi'(q_1) = \varphi'(q_2) = F'(q_3)$$

An increase of production will not in this case change the situation in the internal market. The marginal costs being constant the price in the internal market of a country exporting at a lower rate than the home price will not undergo any change.

The case will be different if the enterprise under examination has decreasing marginal costs, which takes place when the volume of costs is diminishing or when it combines with the constant volume of costs.

When, as in the preceding example, the optimum amount of production and sale in the internal market is  $q_1$ , the amount of dumping at which the marginal cost will equal the marginal revenue in the foreign market  $q_2$  and

$$q_1 + q_2 = q_3$$



and due to the fact that  $q_1 < q_3$

$$F'(q_1) > F'(q_3)$$

hence also

$$\Phi'(q_1) > F'(q_3)$$

Consequently the profit of the monopolist in the internal market ceased to be the highest possible, and therefore the price in that market is no more the optimum monopolistic price.

Striving to obtain the highest profit the monopolist will again try to bring about in the internal market an equalization of the marginal revenue with the marginal costs. He can effect this by an increase of production and sale in the home market to  $q_4$  at which

$$\Phi'(q_4) = F'(q_5); \quad q_2 + q_4 = q_5$$

i. e. the highest possible profit in the home market will be restored.

But an expansion of production and a reduction of costs will shake the equilibrium in the foreign market because

$$\varphi'(q_2) = F'(q_3)$$

consequently when

$$F'(q_5) > F'(q_3)$$

then also

$$\varphi'(q_2) > F'(q_5)$$

which means a deviation from the optimum price in that market.

In order to achieve again the highest profit in that market one must in an analogous way increase production and sales and spread sales in both markets until finally

$$\Phi'(q_n) = \varphi'(q_m) = F'(q_l)$$

at which

$$q_n + q_m = q_l$$

When such an equality becomes established the monopolist achieves the highest profit in both markets, the prices in these markets being the optimum monopolistic prices.

The optimum price in the internal market will undergo a change due to dumping because

$$q_n > q_1$$

and hence at any rate

$$P_n < P_1$$

We can therefore say that with decreasing marginal costs i. e. with a diminishing sum of costs or with its combi-

nation with the constant sum of costs dumping has a lowering effect on the prices in the home market.

The process of the formation of the optimum monopolist prices in both markets can also take a somewhat different course. Immediately after having exported even only a small quantity the monopolist discovers that on account of the reduction of the marginal costs of production the price in the home market will deviate from the optimum and that it will pay to increase selling in this market. Therefore before reaching the optimum price in the foreign market he will already gradually increase sales in the internal market. The final result will be the same as in the former presentation i. e. the price in the home market will fall.

The marginal costs of production can be also increasing which takes place with a progressive sum of costs or its combination with a constant sum.

We assume, as in the preceding examples, that the optimum volume of production and sales in the home market is  $q_1$ , dumping being  $q_2$ , at which volume of export the marginal cost equals the marginal revenue in the foreign market and

$$q_1 + q_2 = q_3$$

Then

$$F'(q_1) < F'(q_3)$$

hence also

$$\Phi'(q_1) < F'(q_3)$$

Consequently the monopolist after the arising of dumping does not obtain the highest profit in the home market.

In order to reach it again he must reduce sales in the home market to the quantity  $q_4$  (at which  $q_4 < q_1$ ),

because

$$\Phi'(q_4) = F'(q_5); \quad q_4 + q_2 = q_5$$

Now again in the foreign market

$$\varphi'(q_2) > F'(q_5)$$

This involves an increase of the exported quantity and further a small reduction of selling in the home market, until finally

$$\Phi'(q_n) = \varphi'(q_m) = F'(q_l)$$

at which  $q_n + q_m = q_l$

When this equality occurs the monopolist's profit is the highest and the prices in both markets the optimum monopolist prices.

The original optimum price in the internal market has been increased due to dumping, because

$$q_n < q_1$$

hence

$$P_n > P_1$$

When therefore the marginal costs of production are increasing, dumping causes a rise of the price in the home market of the exporting country. When the marginal costs of production are increasing the exporter may also immediately after start dumping, and as it increases, restrict selling in the internal market due to a gradual rise of the costs of production. The reduction of the amount of selling in the home market will not be synonymous with a reduction of the volume of production of the given enterprise as the commodity previously sold at home will now be exported in the first place.

In all three examples we assumed that the optimum quantity sold in the home and foreign markets does not exceed the production capacity of the enterprise. If, however, such were the case there are three possibilities.

1. The producer absolutely cannot produce more, then he will distribute his highest possible amount of production between the home and foreign market, first setting the optimum price and quantity in the home market and exporting the rest, for the price in the home market is higher in comparison to that in the foreign market and consequently also the obtained sum of profits bigger.

2. The producer increases investments i. e. the constant part of costs, and continuing to utilise the part of the sum of costs proportionally diminishing he transforms them into the progressively changeable; he continues to expand production in the same conditions, until he reaches the optimum amount in the home and foreign markets.

3. The producer exceeds the limits of the production capacity of his enterprise, which causes a violent progression of the costs of production.

In the latter case, if the marginal costs were constant till

the moment of exceeding the production capacity the price in the home market will increase owing to a further progressive rise of costs.

With the marginal costs diminishing the price will fall only when the costs, increase from the moment of exceeding the production capacity of the enterprise, while increasing will not exceed the height of the marginal costs before starting the dumping.

When the marginal costs are increasing the general progress of the effect of dumping on the price will not change, only the balancing of the now more rapidly growing marginal cost with the marginal revenue will take place sooner i. e. at a smaller quantity than previously.

The exceeding, however, of the production capacity is in the long run rather improbable, for it will be more profitable for the producer to increase the constant costs and to maintain the changing part of the volume of costs in the hitherto existing structure.

\*       \*       \*

We now assume that in the international market free competition in the strict sense of the word prevails. The share of the producer in the entire volume of the supply of the given commodity to the foreign market is so small that it does not influence the price in that market.

Consequently for this producer the price is a fixed value and therefore he will calculate the greatest profit and the optimum price differently:

$$g = u - S$$

$$u = p \cdot q$$

$$p = \text{const.}$$

$g$  will reach its maximum when

$$p - F'(q) = 0$$

i. e. when

$$p = F'(q)$$

Hence the highest profit will be reached when the marginal cost of production will equal the price.

We assume, as previously, that the optimum amount of production and selling in the internal market is  $q_1$ , for

$$\Phi'(q_1) = F'(q_1)$$

Now export takes place because

$$p - F'(q) > 0$$

We assume the marginal costs to be constant then, with the increase of dumping

$$p - F'(q) > 0$$

and consequently a balancing of the price with the marginal cost cannot take place.

The enterprise will be therefore in the first place exploited to the maximum of its production capacity, defined by the constant part of the costs. Let us assume that this capacity is  $q_l$  and that

$$q_1 + q_n = q_l$$

Because

$$F'(q_1) = F'(q_l) = c$$

therefore

$$\Phi'(q_1) = F'(q_l)$$

Within the limits of the constant marginal costs also with free competition, the optimum amount of selling in the home market and consequently also the optimum monopolist price will not undergo any change on account of dumping.

Now we assume again the optimum amount of selling in the home market  $q_1$  and the possibility of export because

$$p - F'(q) > 0$$

The marginal costs, however, will be diminishing, consequently as the exported quantity will be increasing

Therefore the marginal costs will not only be unable to become equal with the stable price, but the difference between these two values will be constantly growing. Consequently the profits of the producer will grow. And here the producer will develop production to the maximum of the production capacity which, let us assume is  $q_l$

Because

$$F'(q_1) > F'(q_l)$$

therefore also

$$\Phi'(q_1) > F'(q_l)$$



On account of the reduction of marginal costs the monopolist price deviated from the optimum. On account of exploiting the production capacity of the enterprise to the maximum the producer will distribute the highest possible quantity of production between the internal and foreign markets.

Consequently the producer owing to the fact that he obtained a higher profit in the home market will reduce export by  $q_m$  and will by this quantity increase sales at home. It will be  $q_{1+m}$ , then

$$\Phi'(q_{1+m}) = F'(q_1)$$

Because

$$q_{1+m} > q_1$$

$$P_{1+m} < P_1$$

Therefore, even with free competition, when dumping takes place at the marginal costs diminishing, the price in the internal market of the exporting country will be reduced.

The optimum amount of selling in the home market is also  $q_1$  and a possibility of export takes place because

$$p - F'(q) > 0$$

But as export increases owing to our assuming the marginal costs of production to be increasing the marginal cost will grow until at the quantity  $q_2$ ,

because

$$p = F''(q_3),$$

at which

$$q_1 + q_2 = q_3$$

Owing to the fact that

$$q_1 < q_3$$

also

$$F''(q_1) < F''(q_3),$$

and therefore

$$\Phi'(q_1) < F''(q_3)$$

Consequently the profit of the monopolist ceased to be the highest possible and the price in the market is not at the optimum point owing to the dumping which caused a rise of the costs of production.

As in the case above described, of marginal costs increasing in the foreign market when monopoly prevails, also here selling in the internal market must be reduced to the quantity  $q_4$ , (in which case  $q_4 < q_1$ ), for

$$\Phi'(q_4) = F'(q_5); \quad q_4 + q_2 = q_5$$

now again in the foreign market

$$p > F'(q_5)$$

this involves an increase of export etc. till finally

$$\Phi'(q_n) = p = F'(q_l)$$

at which

$$q_n + q_m = q_l$$

Owing to the fact that

$$q_n < q_l$$

$$P_n > P_1$$

Consequently the price in the internal market will rise due to the dumping also when in the foreign market free competition prevails and production takes place with increasing marginal costs.

We see when there exists free competition in the foreign market the home price will not undergo any change due to dumping if the marginal costs of production are stable, will diminish when the marginal costs are diminishing, and increases when the marginal costs are increasing in analogy with the case of the monopolistic position of the exporter in the foreign market.

In the case of production at stable and diminishing marginal costs we see that the production capacity of the enterprise has been fully utilised and in spite of that there further exists the possibility of selling at a profit, i. e. an impulse to further production.

The entrepreneur is faced here with one of three possibilities:

1. Due to natural causes further production is impossible; then the highest quantity produced will be distributed between the home and foreign markets from the point of view of highest profit.

2. The producer increases investments i. e. the stable part of the amount of costs and then the changing part of this amount can continue to preserve its proportional or diminishing character and further production will go on with the same conditions as previously prevailing. Such an expansion of production can go on indefinitely; restriction takes place under the influence of natural and technical conditions, which expresses itself in a progression of costs or a complete impossibility of production.

When a progression of costs takes place, then if the

marginal costs were stable within the production capacity of the enterprise, the home price will rise at the expense of progression, while if they were diminishing, the home price will increase when the marginal costs increasing till they become equal with the price will exceed their height from before the time of the beginning of the dumping.

In case of a complete impossibility of further production the entrepreneur will distribute the produced quantity between the home and foreign markets from the point of view of the highest profit.

A restriction of the development of production can also occur from outside, namely the exporter influences at a certain moment the foreign price, which will cease to be stable, will begin to fall. But then the assumption of free competition in the foreign market will not be fulfilled.

3. The third possibility is production beyond the basic production capacity of the enterprise and following it its surcharging and a progression of costs. In this case an equalisation of the increasing marginal costs with the price can take place.

In the latter case if the marginal costs were within the production capacity of the enterprise stable the home price will, owing to progression rise.

But if these were diminishing marginal costs the home price will rise when in increasing, the marginal costs will exceed the height which they had before the beginning of the dumping.

The third possibility is least probable for it will be more advantageous for the producer to increase the stable part of the costs of production, i. e. the second possibility especially when permanent (structural) dumping is concerned which is the subject of our analysis.

With increasing marginal costs we assumed by way of example that the marginal revenue in the home market, the price and the marginal cost will equal each other at a quantity which will be within the production capacity of the enterprise. This limit can, however, be reached before the quantity, at which the above mentioned equation occurs, will be produced.

Then also three similar possibilities arise:

1. Due to natural causes further production is impossible, the result of which is analogous to the case described above.

2. By increasing the stable amount of costs production becomes impossible under the same conditions as previously i. e. when the structure of variable costs is the same.

3. The producer overcharges his enterprise and increases the progression of costs. This, however, is less profitable than the second possibility and consequently less probable in the long run.

We have presented dumping as a secondary phenomenon: there are enterprises producing for the home market and covering their stable costs. Such is often the case in real life, it occurs nevertheless that dumping is taken into consideration when planning a business and making preliminary calculations. When examining the influence of dumping on the home price the task depends in that case on discovering the changes which would occur in the home price in case export at a price lower than the home price were stopped. The solution of this task would be a reversal of our analysis.

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Appendix. 1. The effect of dumping on the home price, the position of the producer being monopolistic in the foreign market is given in graph 1.

We assume that both countries which enter into business relations have the same currency or that the whole calculation is done in the same currency which allows us to place the diagrams of the prices and at the same time of the marginal costs and of the marginal turnovers in both markets in the same scale. Country I. is the exporting, II. the importing country. On axis  $X$  are marked the quantities of commodities, on axis  $Y$  the monetary units. Axis  $X$  of country II. is raised by the sector  $O'O$ , which corresponds to the costs of transportation.

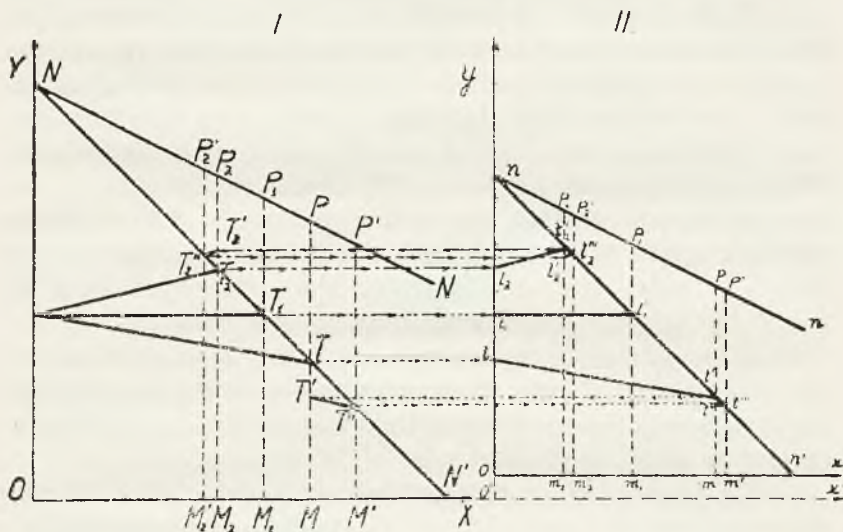
In the first system of coordinates i. e. in country I. the straight line  $NN$  represents demand,  $NN'$  the marginal revenue. The straight line  $AT_1$  in this system marks the constant marginal cost,  $AT$  the diminishing marginal cost,  $AT_2$  the increasing one.

Let us first take into consideration the constant marginal costs represented, as we have mentioned, by the straight line  $AT_1$ . They intersect the curve of the marginal revenue in point  $T_1$ ; the price  $P_1$  corresponding to this point, marked on the curve of demand is the optimum monopolist price, the quantity  $OM_1$  marked on axis  $X$  is the amount of production



and selling in the internal market, corresponding to the optimum price.

When dumping begins we transfer the marginal costs from point  $T_1$  to the second system i. e. country II. as is shown by the arrows, to point  $t_1$ . Here the straight line  $nn$  represents



Graph 1

the demand, while  $nn'$  the marginal revenue in this market. From point  $t_1$  we draw the curve of the marginal costs to its intersection with the curve of the marginal revenue which will occur at point  $t'_1$ . The quantity  $om_1$  corresponding to this point represents the height of the dumping while the price  $p_1$  is the optimum monopolist price in the foreign market. Owing to the dumping the home price  $P_1$  will not undergo any change.

With diminishing marginal costs, which are marked by the straight line  $AT_1$ , the optimum price in the internal market is  $P$ , and the amount of production and selling  $OM$ . At the beginning of dumping we transfer the marginal costs from point  $T$  to the system of country II, in the direction of the arrows, to point  $t$  and draw them to the intersection with the curve of the marginal revenue in point  $t'$ . But now the marginal costs diminished, therefore we transfer it back to system I



to point  $T'$  and draw it further to point  $T''$ , in which it will intersect with the curve of the marginal revenue in the internal market. This causes a further reduction of costs, therefore we transfer them again to system II. to point  $t''$  and draw them further to point  $t'''$ .

This will again cause a slight reduction of marginal costs and a fresh expansion of selling in the home market etc. which has not been shown in the diagram owing to technical reasons. Equilibrium will be attained when the marginal costs and the marginal revenue in the market of the exporting country and in the foreign market will equal each other.

When the marginal costs are diminishing then owing to the dumping the price in the market of the exporting country at a price lower than the home price, will diminish from  $P$  to  $P'$  and the amount of selling in this market will increase from  $OM$  to  $OM'$ .

Finally if we take into consideration the increasing marginal costs  $AT_2$  the optimum price in the internal market will be  $P_2$  while the amount of selling is  $OM_2$ . In the case of dumping we shall draw the costs in an analogous way in the second system of coordinates through points  $t_2$  and  $t'_2$ , then in the system of country I. through points  $T'_2$  and  $T''_2$  and again in system II. through  $t''_2$  and  $t'''_2$ . In theory we repeat this activity until the marginal costs will equal the marginal revenue both at home and abroad.

Here dumping brought about a rise of the home price from  $P_2$  to  $P'_2$  as well as a reduction of selling in the home market from  $OM_2$  to  $OM'_2$ .

2. The changes which the home price can undergo under the influence of dumping when there is free competition in the foreign market are given in graph 2.

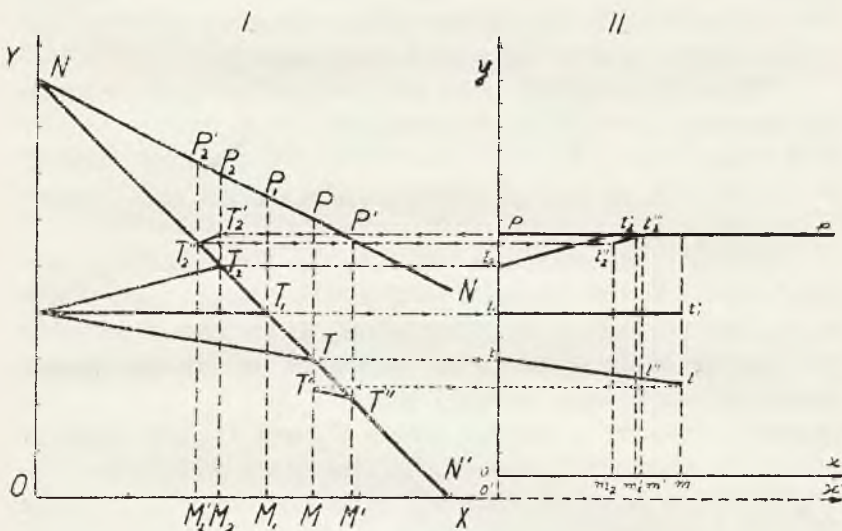
The assumptions which we made when discussing diagram 1 concern also this diagram. The first system i. e. that of country I. is here identical with the same system in diagram 1. In the system of country II. the straight line  $pp$  represents the foreign price which for our exporter is stable, at the same time being lower than the price in the market of the exporting country and higher than the marginal costs.

We transfer, after beginning the dumping, the constant

marginal costs  $AT_1$  from point  $T_1$  to system II. to point  $t_1$  and we draw it further till the exploitation of the producing capacity of the enterprise i. e. to point  $t'_1$ . The producing capacity of the enterprise is here the quantity  $OM_1 + om$ .

The marginal costs being such the optimum monopolist price in country *I* will undergo no changes.

If we take into consideration the diminishing marginal costs  $AT$ , we shall, after the arising of dumping, transfer them



Graph 2

to the second system of coordinates to point  $t$  and further to  $t'$ . A further expansion of production is impossible because the producing capacity of the business is here  $OM + om$ . Owing to the dumping which caused the expansion of production the marginal costs were lowered. Consequently the price in the home market deviated from the optimum. But as it is higher than the foreign price it is more advantageous for the producer to sell the commodities at home than abroad.

Having then exploited the enterprise to the utmost he will restrict dumping export from  $om$  to  $om'$ , and by this quantity increase selling in the home market, which will increase from  $OM$  to  $OM'$ , the price falling from  $P$  to  $P'$ .

We shall finally consider the increasing marginal costs  $AT_2$ . After starting dumping and transferring those costs to point  $t_2$  in the second system, export will continue till their intersection with the price, which will take place in point  $t'_2$ . An expansion of production will increase the marginal costs and therefore we shall again transfer them to system I. to point  $T'_2$  and mark the decrease of production and the lowering of costs connected with it in point  $T''_2$ . Now again an increase of dumping to point  $t'''_2$  in the second system will take place.

Owing to this influence the optimum monopolist price in the home market will increase from  $P_2$  to  $P'_2$ .

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### Streszczenie

*Jerzy W. Massalski: Dumping i cena krajowa*

Przez słowo dumping określa autor sprzedaż towarów za granicę po cenie niższej od ceny tego towaru w kraju. Dumping jest możliwy tylko przy monopolu. Przy wolnej konkurencji na rynku krajowym sprzedawanie za granicą taniej niż w kraju jest nierentowne i miałoby miejsce jedynie przy istnieniu premii eksportowych. Drugim warunkiem dumpingu jest ochrona celna.

Płóć rzucaną na rynek oraz cenę określa monopolista w ten sposób, aby wyrównać krańcowy obrót z krańcowymi kosztami; o ile powstanie dla niego możliwość eksportu, zdecyduje się na wywóz takiej ilości, aby krańcowe koszty wyrównały się z krańcowym utargiem zagranicznym. Przyjmujemy najprzód, że na rynku zagranicznym dany eksporter ma również stanowisko monopoliczne, krańcowy utarg jego jest malejący. W tych warunkach monopolista osiąga największy zysk, gdy krańcowy utarg na rynku krajowym i zagranicznym oraz krańcowe koszty produkcji zrównają się ze sobą. Wpływ dumpingu na cenę krajową może być różny, zależnie od tego, czy krańcowe koszty produkcji rosną, pozostają stałe, czy maleją z rozszerzaniem się produkcji. Przy kosztach krańcowych stałych opłaci się dumping w takim rozmiarze, jak długo koszty te są niższe niż krańcowy utarg zagraniczny, rozszerzenie produkcji nie naruszy równości krańcowego utargu i krańcowych kosztów w kraju, także i cena

krajowa nie ulegnie zmianie. Inaczej będzie przedstawiać się sprawa, jeżeli badane przedsiębiorstwo ma koszty krańcowe produkcji malejące. Dumping wyrównujący krańcowe koszty i krańcowy obrót zagraniczny równocześnie obniża koszty krańcowe. Zysk monopolisty na rynku krajowym przestał być maksymalny i opłaci mu się obniżyć cenę i zwiększyć zbyty krajowy. Następuje jednak skutkiem tego dalsze obniżenie kosztów krańcowych i możliwym staje się zwiększenie zysku ze sprzedaży zagranicznej przez obniżkę ceny eksportowej i wzrost ilości wywożonej.

Dopiero wtedy, gdy wyrównają się krańcowe koszty produkcji z krajowym i zagranicznym krańcowym obrotem, monopolista osiągnie największy zysk na obydwu rynkach, a ceny na tych rynkach będą optymalnymi cenami monopolistycznymi. Cena optymalna na rynku wewnętrznym ulegnie wskutek dumpingu obniżce, ponieważ obniżające się krańcowe koszty produkcji skłonią monopolistę do zwiększenia zbytu krajowego. Inaczej wpływa dumping przy kosztach krańcowych rosnących. Dumping, doprowadzający do zrównania krańcowych kosztów i krańcowego utargu zagranicznego, powoduje równocześnie wyżkę krańcowych kosztów. Istniejąca poprzednio równość krańcowych kosztów i krańcowego obrotu krajowego zostaje tym samym zniszczona i jedynie ograniczenie zbytu i podwyżka ceny krajowej może z powrotem tę równość ustalić. Cena krajowa ulegnie więc wyżce. Ograniczenie produkcji znów jednak obniży koszty, co skłania skolei do wzrostu ilości eksportowanej i przez podwyżkę kosztów krańcowych do ograniczenia podaży krajowej. W punkcie równowagi podaż krajowa będzie mniejsza a cena wyższa, niż przed rozpoczęciem dumpingu. Powyższy podział kosztów opiera się na założeniu, że całkowity zbyty monopolisty nie przekracza zdolności produkcyjnej. Gdyby to zachodziło, a rozszerzenie produkcji nie było możliwe, wówczas monopolista rozłożyłby maksymalną ilość pomiędzy rynek krajowy i zagraniczny, jeżeli zaś dalsza produkcja jest możliwa, to albo powiększy on inwestycje, albo przeciąży zakład. Ponieważ jednak koszty krańcowe wzrosłyby wtedy silnie, autor sądzi, że prawdopodobniejsze jest powiększenie stałej części urządzeń.

Z kolei bada autor wpływ dumpingu na cenę krajową przy wolnej konkurencji na rynku zagranicznym. Cena zagraniczna



jest tu dla producenta wielkością stałą i równa się krańcowemu obrotowi. Największy zatem zysk zostanie osiągnięty wtedy, gdy koszt krańcowy zrówna się z ceną. O ile koszt krańcowe monopolisty są stałe, to pomimo wzrostu ilości eksportowanej koszt krańcowy pozostaje niższy od ceny zagranicznej. Autor przyjmuje, że przedsiębiorstwo zostanie wyzyskane do maximum zdolności produkcyjnej, a ponieważ koszty krańcowe pozostają stałe, więc nie ulegnie zmianie krańcowy obrót krajowy i cena krajowa. Przy malejących kosztach krańcowych wyrównanie ich ze stałą ceną zagraniczną tym bardziej nie będzie mogło nastąpić i przedsiębiorca rozwinie produkcję do maksimum zdolności produkcyjnej przedsiębiorstwa. Cena monopoliczna krajowa odchyła się jednak od optimum, skutkiem spadku kosztów krańcowych, aby osiągnąć maksimum zysku na sprzedaży krajowej monopolista obniży tu cenę i powiększy zbył krajowy, kosztem eksportu. Jeżeli koszt krańcowe będą rosnące, eksport trwać będzie aż do zrównania się ich z ceną zagraniczną, równocześnie jednak wzrost kosztów burzy dotychczasową równość krańcowych kosztów i krańcowych obrotów na rynku krajowym, równość ta może być przywrócona jedynie przez ograniczenie zbytu i wzrost ceny krajowej.

W dodatku rozwiązuje autor zagadnienie wpływu dumpingu na cenę krajową metodą graficzną, dochodząc do takich samych wyników jak wskazane powyżej.

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STEFAN BOLLAND

## THE PROBLEM OF FRICTIONS

The term "frictions" — "frictional phenomena" though frequently encountered in literature does not possess a strictly established meaning<sup>1</sup>. Therefore it should be observed at the very beginning that in the present paper I shall use these terms for designating phenomena, or causes of phenomena, making the achievement of equilibrium more difficult or impossible. (The adjective "economic" is omitted purposely). Under equilibrium, according to one of the most widely spread definitions, one is to understand a condition in which the marginal utilities of all goods are equalised; with a given amount of goods (which is to be understood as the whole of external conditions) and a given intensity of needs, the individual gains then — as is generally known — the maximum of attainable satisfaction<sup>2</sup>.

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<sup>1</sup> As far as I could ascertain, this term appears for the first time in Mill who compares the causes disturbing economic laws with the rôle of friction in mechanics. J. St. Mill, *Essays on Some Unsettled Questions of Political Economy*, 1844, 2nd ed. London 1874, p. 150; Essay V: „On the definition of political economy and on the method of investigation proper to it“; Cf. also his, *A System of Logic Ratiocinative and Inductive*, Bk. III, Ch. VI, § 1, and Bk. VI, Ch. IX, § 3.

<sup>2</sup> The considerations given above are based on a view which is not universally accepted; they will — perhaps — be called in question by the methodological school which denying the so-called second law of Gossen, considers it in general to be erroneous to construct the theory of equilibrium on a tendency towards an equalisation of the marginal utility of goods (as e. g. E. Taylor in his review of the paper of Libicki "Ekonomista" XXXIII, vol. III, p. 118). The objection raised by these economists can be briefly stated as follows: "Gossen's second law is untrue because due to the imperfect divisibility of goods, it does not state reality but *eine blosse*

Consequently a frictional phenomenon will be every circumstance which makes it impossible for the individual to satisfy all needs in an equal degree but forces him to satisfy some needs above and others below the intensity of all other needs<sup>1</sup>.

To the conception of frictions formulated in this manner there correspond in the world of external phenomena certain concrete and real facts resulting — as we shall see below — from the objective, natural and technical qualities of those phenomena, and in particular from the rôle which is played in their development by the element of time<sup>2</sup>, as well as from restrictions in the divisibility of goods. Therefore an examination of frictional phenomena conceived in this

*Fiktion*“ (Cf. P. N. Rosenstein-Rodan: *Grenznutzen* in *Hdw. der Staatswissenschaften*, 4th ed. 1927, p. 1203). However all “laws” of a deductive character, anticipating a certain development of future phenomena in case certain conditions arise, are—as is well known—true only in so far as the conditions assumed by them happen in reality. Therefore I prefer to say that “Gossen’s second law is true, but *frictional phenomena* in certain cases render an equalisation of the level of marginal utilities impossible“. I think both statements to be correct. But the second seems to me to be more useful.

With regard to other objections raised against Gossen’s law (discontinuity of the curve of utility) see P. N. Rosenstein-Rodan, *op. cit.*

It is interesting to note that while some authors attach such a basic importance to a limited divisibility of goods, others, especially Pareto, consider it insignificant. Pareto is of the opinion that the error committed by neglecting this circumstance in theoretical statements is insignificant and that moreover from the statistical point of view it is to be expected that it will be compensated in phenomena of a social character (*Manuel d’Économie Politique*, chap. III, 65—translated by A. Bonnet, Paris 1927, p. 173). This view does not seem convincing.

<sup>1</sup> I omit complications resulting from compulsory, physical and legal restrictions of the individual in the liberty of directing his actions. Cases of physical compulsion do not at all present any economic problem; while submission to legal standards enforced by the sanctions of the state executive is a choice of alternatives considered by the individual to be the most advantageous of all possible ones, and therefore is a symptom of a tendency towards equilibrium. (“*Quamvis si liberum esse noluisssem, tamen coactus volui*“ — *Digesta*).

<sup>2</sup> To this group of frictional phenomena the definition of E. Taylor refers, who defines frictions as “the causes of an unequal attainment of equilibrium by the various elements“. „*Metoda Ekonomiki*“, (*The Method of Economics*) „*Ekonomista*“, XXXV, vol. I, p. 15).

way belongs to the morphology of so-called economic phenomena and not to the methodology of economics.

This morphological character of the problem of frictions should be strongly emphasized in order to set it distinctly apart from the problem of "pseudo-frictions" resulting from a certain special classification of phenomena, in dependence on the assumed methodological standpoint. Because the view is widely spread that the tendency to satisfy needs is proper to man only within one of many spheres of his activity, namely in the sphere called — just because of that — economic activity. In connection with this there exists the conviction that the disturbances of the "economic" equilibriums are, among others, the result of "extra-economic" influences i. e. derived from other spheres of human activity, these disturbances being also defined by the name of frictions<sup>1</sup>. I do not consider this terminology to be correct for it unites under one head phenomena and problems of a quite different nature. Because as I shall try to prove in the following, I am of the opinion that a tendency to equilibrium is manifested — though in less typical forms — in all spheres of human activity, and that the division into "economic" and other spheres, carried out from this point of view, cannot be maintained.

The decision in this controversy is however a question of a methodological character. But independently of the methodological statements accepted by us, independently of our view as to the scope and subject-matter of economics and of such like questions, we can state the existence and establish forms of phenomena which, connected by their causes with the external world, render it impossible to achieve equilibrium in the satisfaction of needs. We shall continue to use the term of frictions exclusively for designating those phenomena.

The problem attacked will be in its entirety developed below on broader lines. The aim of the foregoing remarks has been solely to remove lacks of clearness in terminology.

# I

The rôle played in economics by the element of time has been the subject of numerous investigations. This problem has

<sup>1</sup> Palgrave's *Dictionary of Political Economy*, see below, footnote p. 60.

been presented, in a way particularly suited to serve as a background for the problem of frictions, by O. Lange in his paper on the statistical investigation of business cycles; the arguments given below are in a great measure based on the statements presented in that paper<sup>1</sup>.

The satisfying of needs which due to their nature cannot be fully satisfied, takes place as a rule according to a certain plan. This plan is established by the economic individual, taking into consideration on the one hand the amounts of the available goods (and in general the natural and technical conditions) and on the other a subjectively felt intensity of needs, so as to attain an equilibrium in satisfying them. The realization of this plan (the production and the consumption of the goods in question) requires a certain time. If however the needs were felt by this individual permanently with the same intensity, while there would be in the external world no changes making the satisfaction of some of these needs easier or more difficult, then this lapse of time would not cause any frictional phenomena besides the initial retardation in attaining the state of equilibrium. But with the moment of attaining this condition the individual would remain in the state of equilibrium permanently, replacing — according to a once conceived plan — the consumed goods by new ones. (Static economy).

But as is well known, this kind of invariable state is not met with in reality. Constant changes are the rule here, both subjective (in the intensity of the needs felt) and objective (in the natural and technical conditions). By these changes the individual is forced to form new dispositions and to establish a new plan tending to the attainment of a new state of equilibrium. (Dynamic economy).

Of course if such a change would occur too soon then "there will be no time" for the realization of the originally planned state of equilibrium. The individual will desist from its

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<sup>1</sup> O. Lange, *Statystyczne badanie koniunktury gospodarczej* (*The Statistical Investigation of Business Cycles*) „Czasopismo Prawnicze“, Cracow 1931, abstracted in "Economic Studies I" Cf. also: P. N. Rosenstein-Rodan, *Das Zeitmoment in der mathematischen Theorie des wirtschaftlichen Gleichgewichtes*, "Zeitschrift für National Oek." 1930, I. and *The Rôle of Time in Economic Theory*, „Economica" 1934, I.



realization midway as it were, turning his activity into a new direction. If we assume that such changes occur persistently before the lapse of the period necessary for an adjustment to occurring conditions, we shall obtain a full picture of the frictional effect brought about by the lapse of time: the state of equilibrium will not be attained at all.

In reality for the magnitude of this type of frictions the circumstance is decisive whether isolated individual economies are concerned or a community of individual economies which remain with each other in exchange relations, while within the various individual economies the question is important whether they are economies of a consuming or producing character. In the case of an individual isolated economy e. g. a self-sufficient rural economy, the adjustment of the economic plan to the changed data of management is a question of using such or other technical means destined directly to the satisfaction of such or other needs. (E. g. an increase in growing wheat and a restriction in growing rye). In such an economy the achievement of equilibrium is simple and practicable, even with rather frequent changes of dates. Theoretically on the same level as an individual isolated economy stands an integral planned economy i. e. one which does not at all possess exchange (leaving it undiscussed if such an organisation is at all possible). On the other hand in exchange-economy frictional phenomena become intensified owing to complications which take place in the process of adjustment. These complications are attributable to the fact that not only the needs and the natural and technical possibilities of obtaining the necessary goods are the economic data of the different individual economies, but also (or rather above all) the prices of these goods. These economies, taking into consideration the prices of goods in their present amount, have a tendency to disregard in their economic plan the influence exercised on those prices by their own presence in the market. Nevertheless, however, a change of the dispositions of every individual economy, while influencing supply and demand, changes prices. This change introduces a new change of economic data and forces all economies to designate a new state of equilibrium and to frame, in order to realise it, new dispositions. There ensues a further change of prices and a fresh translocation



of the situation of equilibrium. These oscillations become, however, smaller and smaller. Each of them contributes to the harmonization of the conditions of equilibrium of all economies. But as is well known, before the conclusion of this process there usually ensues a new, primitive change of economic data bringing about a new series of derivative changes and "tentative oscillations"<sup>1</sup>.

It has been mentioned above that the dimensions of frictional phenomena depend moreover on the character of an individual economy. This is connected with the length of the periods of adjustment which are shorter in consuming and longer in producing economies. A change of data in a consuming economy is reflected only in the budget of this economy. Of course changes in incomes or needs of consuming economies will exercise their influence on prices and may call forth the series of oscillations described above. But the adjustment of individual consuming economies to new conditions takes place almost immediately. The case is similar in commercial economies. On the contrary wage-earning economies concerned with production, in the technical sense of this word, have relatively long periods of adjustment, further considerable differences occurring between the various economies of this category. Thus e. g. in agriculture the periods of adjustment last a year or more, but e. g. in fruit or forest cultures — some twenty or eighty years<sup>2</sup>. In general, however, I think that without raising claims to greater accuracy one may say that the length of the periods of adjustment is in direct ratio to the amount of real capital invested in the economy. As is well known there exists for each enterprise a certain ratio of the different components of production to which corresponds a maxi-

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<sup>1</sup> Cf. Lange, *op. cit.*

<sup>2</sup> The foundation of an orchard or a forest is based (leaving aside questions of the legal protection of forests) on the calculation of fruit or timber prices at a given moment. The anticipation of the level of these prices for the time when the first cutting of timber or the first fruiterop will take place is practically impossible. If in the meantime a change of those prices takes place, then the effect of an adjustment of the economy to new conditions e. g. the dimission of planting new trees in the cut parts of the forest, will make itself felt only after sixty or eighty years when the prices may undergo further changes.

mun of rentability. A change of the economic data e. g. a change in demand for a product, a change in the level of wages etc., may cause a change of this ratio. If such a change concerns existing technical arrangements it is impossible to carry it out immediately. The necessity of the amortisation of real capital stiffens for many years the mutual relation of the factors of production. The lowering of the rentability below the actual rate of interest, caused by this, is the type of a protracted frictional phenomenon known under the name of over-investment not only of different units but of whole branches of production.

The inequality of the periods of adjustment of the various individual economies prolongs the length of the periods of adjustment of exchange economy as a whole<sup>1</sup>, since the fact that certain enterprises or rather whole groups of enterprises are beyond the state of equilibrium in the course of the process of adjustment, renders the stabilisation of prices impossible and causes continuous oscillations in other economies, also in those which, having shorter periods of adjustment, could have already had attained the state of equilibrium. Due to this the number of oscillations through which all economies have to pass increases before harmonizing their conditions of equilibrium.

The dimensions of frictional phenomena based on the element of time depend therefore on the type and forms of economy. Leaving aside the type of economy in a static state we encounter their weakest intensity in an isolated individual economy. The true domain of "temporary" frictions is an exchange economy especially in its great capitalistic forms where the frictional phenomena reach dimensions which are sometimes decisive for the picture of economic life.

## II

Contrary to the hitherto discussed "temporary" frictions, the group of frictional phenomena resulting from the limited divisibility of goods has not until now found a detailed treatment or explanation. These questions have been touched by

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<sup>1</sup> Lange, *l. c.*

Professor Heydel in his "Remarks on the Discontinuity of the Function in Economics"<sup>1</sup>. The suggestions which his paper contains have become the starting point for the argumentation given below.

When speaking of the limitations in the divisibility of goods I have in mind cases in which certain goods due to natural and technical or technically commercial reasons are not available in arbitrarily small amounts but in certain, defined, relatively large quantities. The frictional effect of these limitations consists in the fact that the individual being unable to obtain the necessary goods in the required amounts (but only in somewhat larger amounts) does not arrive at an equalisation of their marginal utilities and consequently does not reach equilibrium in satisfying needs.<sup>2</sup>

Indivisibility of this kind manifests itself in various forms causing the rise of frictions of different intensities. Thus e. g. many objects of everyday use must be always bought in quantities surpassing immediate needs. (E. g. a bottle of ink which will last several weeks, a package of tobacco). The designation of the smallest commercial unit is, however, almost exclusively a question of custom and therefore this kind of limitation of the divisibility of goods does not in general cause greater frictional phenomena, because in general it is indifferent for us whether we supply ourselves with ink, tobacco and so forth somewhat more frequently or somewhat more rarely for a somewhat earlier expenditure of a sum of money does not play any rôle for us as long as *quantités négligeables* are concerned. What constitutes a *quantité négligeable* is of course decided by the degree of wealth. In Poland — as is well known — such objects as cigarettes, sheets of notepaper and even sweetmeats may be bought by the piece<sup>3</sup>. Evidently in the daily or weekly budgets of the customers there is no extra cash which would permit buying a whole box of cigarettes at once. The introduction of a box of cigarettes as the smallest commercial unit (as is the case in other countries) would in Poland cause frictional pheno-

<sup>1</sup> "Ekonomista", XXXIV, vol. II, 1934.

<sup>2</sup> "Variations discontinues" of Pareto's theory of the electorate.

<sup>3</sup> Cf. A. Heydel, *Uwagi o nieciągłości funkcji w ekonomii*.

mena, because poorer consumers who do not possess sufficient cash would have difficulties in the simultaneous purchase of other, equally necessary goods.

We encounter stronger frictional effects where the indivisibility (or the limited divisibility) of goods does not result from business customs but from the natural and technical qualities of things. This refers especially to those goods which are not consumed by being used only once, but by durable use. The utility e. g. of a hat or a motor-car cannot be an object of business in fragmentary parts, for it cannot be separated from those objects, while half a hat or half a motor-car does not represent any utility whatsoever (from the point of view of those needs which are satisfied by a whole hat or a whole motor-car). Though for instance I feel the want of a motor-car of my own I think that by buying a motor-car my need would be satisfied above the level on which I stopped satisfying other needs. Owing to this, though in certain cases the substitution of goods is of some help, nevertheless an accurate equalisation of their marginal utilities is in general made difficult.

Similar difficulties appear also due to the relatively broad differences in the quality of some objects, which — as I suppose — in a selfevident way excludes exactness in dosing them. (Qualitative differences are reduced properly speaking from our point of view to quantitative differences because a better quality of the same e. g. coal satisfies the same need in a higher degree). All these difficulties become complicated and increase the effect of frictional phenomena owing to the fact that the majority of objects possesses the ability of a simultaneous satisfaction by their qualities, of more needs than one and therefore unite in themselves as it were several goods. A motor-car, for instance, satisfies not only the need of locomotion but also the need of certain sporting and tourist impressions, we want furniture to be both comfortable and beautiful, and so forth. This circumstance is important for the problem of frictions because the quantitative ratios occurring between the different features of a given object, restricting our freedom of choice, define within a certain range beforehand the degree in which the various needs may be satisfied. The objects in the market e. g. furniture, to a great extent, take into account the possibili-



ties of combining various features (each of which constitutes a separate good) for instance comfort and beauty, but they of course do not exhaust these possibilities. If from among pieces of furniture from which we may choose, some seem suitable to us on account of their comfort but unsatisfactory aesthetically and vice versa, then our choice be the result of a certain compromise: we shall be aware that we would have preferred for instance a somewhat less comfortable easy-chair but as a compensation one somewhat more beautiful<sup>1</sup>. In other words we shall realise that by buying this armchair we have satisfied a certain need in a higher, another in a lower degree, though our ideal was their equalisation.

Though the examples adduced concerned consumption economy, the type of frictions discussed plays a rather more important rôle in the sphere of producing economies. Limitations in the divisibility render more difficult or perhaps even impossible the optimum harmonization of the factors of production which cannot be rationed in sufficiently small units i. e. in a continuous manner. This relates specially to real capital, machines, buildings etc. owing to which in certain branches of industry production on a small scale is impossible while in others the development of enterprises can only advance by great bounds, with the elimination of intermediary stages.

There are reasons to suppose that this discontinuity must be the source of particularly strong frictional disturbances in the form of oscillations of rentability in those cases in which the point of the optimum productivity coincides with, or lies in the vicinity of, the point of maximum productivity in the technical sense. This makes impossible an increase of production by overloading existing technical arrangements. In the remaining cases such overloading is possible though it causes a lowering of rentability. E. g. a printing shop which is most profitable at an eight hour working day can increase its production either through the purchase of a new linotype or by surcharging the existing technical apparatus by additional working hours, in case a "whole" new linotype would not yet "pay". The frictional phenomenon which is the result of the indivisibility of goods

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<sup>1</sup> Discontinuity of the curve of indifference.



will be limited here to a slight increase of the cost of the marginal product (more expensive additional working hours). On the other hand e. g. a telephone exchange for 10.000 subscribers which has the lowest marginal cost and the best rentability when actually fully exploited, cannot be overloaded: it cannot supply services to even one more customer. Its productivity may only be increased by developing the technical equipment which would permit adding a further few thousand subscribers, an operation connected with a change of the cost curve.

A discussion of particular cases, in dependence on the mutual relation of the cost curve and the curve of technical efficiency, though very interesting for the knowledge of frictional phenomena, would be beyond the scope of the present remarks, their subject being only a general survey of those phenomena within the two types, cited above.

### III

There remains to be explained the question of so-called extraeconomic factors, whose influence allegedly disturbing the process of the economic phenomena is also counted among frictional elements. Thus e. g. the definition of frictions given in Palgrave's Dictionary of Political Economy defines them as "the disturbing effects of causes that are not economic, on the action of the causes that are strictly so called..."<sup>1</sup>. I have already stated above that I do not share the view expressed in this definition for I do not see the possibility of discerning between various kinds of a tendency to equilibrium allegedly colliding with each other.

The tackling of these problems is dangerous. It means the risk of losing the essence of the problem in a flood of psy-

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<sup>1</sup> See the article on *Friction in Economics* (vol. II, p. 110), signed J. B. (J. Bonnar) and M. G. D. (M. G. Davidson): "In economic investigation... abstraction is made from the mass of general human motives; ...only one of them is traced out first of all... *The disturbing effect* of causes that are *not economic*, on the action of the causes that are strictly so called, may be regarded as *economic friction*... Not only the customs, but the vices, follies and mistakes of men are accountable for economic friction. Economic tendencies too, may be counteracted deliberately and advisedly by the principles of morality, statesmanship, art, religion, or pedagogics".

Quoted from the London edition of 1923.

chological arguments which actually will be only methodological remarks on the margin of the science of economics. I do not, however, see the possibility of their complete omission; I shall therefore limit myself to raising only the most fundamental points of my argument.

In a study specially devoted to these problems<sup>1</sup> Prof. Heydel analysing the essence of economic activity contrasts it with two types of different behaviour in man. The first type is the conduct of man whose only motive of action is the desire to obtain immediate pleasures and to avoid immediate displeasures ("Homo consumens"). The second type is represented by the man who estimates objects from the point of view of their indirect usefulness in reaching the intended aim but who does not compare the various aims with each other in order to discover which of them and in what measure should be realised ("Homo technicus"). From both these types the idea of equilibrium in satisfying needs is absent which is known only to the economic man ("Homo economicus") i. e. one who estimates objects not on account of their fitness in satisfying this or that concrete need, but in consideration of obtaining the maximum possible advantage in general. According to this conception, cases of activity directed towards the attainment of certain aims without comparing the burdens sustained with the advantage obtained should be treated as frictional phenomena constituting that "disturbing effect" of extra-economic factors. It is only a question whether cases of this kind do at all exist.

This question may seem unexpected. It suggests those actions resulting from "principles of morality, statesmanship, art, religion or pedagogics"<sup>2</sup> which we usually oppose to calculation, desire of wealth and hedonism. The essence of those actions is frequently the renunciation of all apparent advantage, to which we actually attribute this high ethical value. But those very reflexes which cast our valuation into the sphere of theoretical judgments are the chief cause of misunderstanding. When

<sup>1</sup> A. Heydel, *Podstawowe zagadnienia metodologiczne ekonomii* (*The Basic Methodological Problems of Economics*). The Polish Academy of Sciences and Letters, Cracow 1925.

<sup>2</sup> Palgrave, l. c.

we speak of renouncing advantages — particularly material ones — we omit those advantages which the person who makes the sacrifice gains in the form of inner satisfaction; though that satisfaction can neither be measured nor in any quantitative manner be compared with the sacrifice made, nevertheless its value must be evidently higher for the person concerned than the sustained disadvantage. If for instance an employer under the influence of humanitarian sentiments will on his own account raise the wages of the workers or the workers due to their attachment to their native district will not profit from advantageous emigration possibilities<sup>1</sup>, it is so because then they experience a moral satisfaction which will compensate their material loss with a surplus. The sum of the rents which they will gain on the one hand for the satisfaction of their material needs, and on the other in the sphere of their feelings, will then be the maximum possible, otherwise they certainly would not have so acted. It is true that the calculation of that surplus is in no way similar to business calculation, but this is rather a technical question<sup>2</sup>. The whole difference between phenomena traditionally counted among manifestations of man's economic activity and those to which we deny this character, depends exclusively on a greater or smaller mensurability of that sum of surpluses. In the sphere "of the material welfare or wealth of human beings"<sup>3</sup>, these surpluses are in general well measurable in monetary units, while so-called spiritual goods are mostly "extra commercium" due to which their

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<sup>1</sup> These cases represent in my opinion classical examples of what according to the conception of economic activity mentioned above should be considered as frictional phenomena.

<sup>2</sup> This problem has much in common with the controversy taking place between the ideas of egoism and altruism. "The expressions "egoism" and "egoistic" are constantly used in everyday life, people being unaware, in their majority not even guessing, how difficult it is to establish their proper sense and discover a case of such an altruistic behaviour which would not be guided by the consciousness that through it we potentiate our own self-conscious existence at least at the moment of an action of this kind, or, speaking more generally, that we shall be rewarded at least in our own conscience for what we do for others, renouncing for them some pleasure". W. Rubczyński, *Zarys etyki (An Outline of Ethics)*, The Polish Academy of Letters and Sciences, Cracow 1916, p. 88.

<sup>3</sup> E. Cannan, *Wealth*, 2nd edition, London 1914, p. 17.

utilities are difficult to be quantitatively expressed and compared. But those differences depend to a certain extent on time and place: it would be difficult to find even one good (*sensu largo*) which would not have been somewhere, somewhen, sold and bought. But the very fact of the formation of psychical dispositions directed towards the attainment of a more or less mensurable surplus of general profit "does not in any way depend on the objective features of the phenomenon"<sup>1</sup> and appears everywhere where man has the possibility of choice between two or more alternatives<sup>2</sup>.

In this light the so-called "extra-economic factors" become a meaningless truism while the pseudo-frictions attributed to them prove to be deprived of any objectively definable features. We may, if we agree to do so, call the philanthropic activity, of the entrepreneur towards his workers cited above an economic friction, but consistently we shall have to acknowledge as e. g. friction a lowering by the same entrepreneur of his expenses for cinema tickets in favour of a more frequent visit to the bar<sup>3</sup>. For I see indeed no reason why one these of

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<sup>1</sup> A. Heydel, *Basic Problems*, p. 81.

<sup>2</sup> Cf. the "scarcity-definition" of economics given by L. Robbins: "Economics is the science which studies human behaviour as a relationship between ends and scarce means which have alternative uses" (*An Essay on the Nature and Significance of Economic Science*, London 1932, p. 15).

<sup>3</sup> In fact we can no doubt rightly state that in modern circumstances the philanthropic disposition of entrepreneurs has such a slight influence on the formation of the wages of workers that examining the regularities of the formation of those wages we may — for the sake of simplification — omit this factor as *nonessential* which we, however, cannot say of the influence which cinema tickets and bar price lists exercise on each other. On what we shall consider as the *essentiale* and what as the *accidentale* of a given phenomenon, and on how, in dependence on our view on this question we shall build this scheme, its conformity or discrepancy with experience, ("pseudo-frictions") will depend.

It seems that by examining the size of that discrepancy in particular, concrete cases one could lend certain theoretical statements a greater suitability for explaining reality (Cf. S. Bolland: *Studium nad metodą statystycznego badania terytorialnej jednorodności rynku*, (*A Study on the Method of the Statistical Investigation of the Territorial Homogeneity of the Market*) "Czasopismo Prawnicze", Cracow 1935. — English summary in "Economic Studies", III, published by the Economic Institute of the Polish Academy of Sciences and Letters, Cracow 1936.



phenomena should be considered conformable and the other contradictory to the tendency to equilibrium in satisfying needs<sup>1</sup>. Therefore I deemed it proper to restrict the conception of friction only to the two types of phenomena represented above, based on the element of time and on the discontinuous divisibility of goods.

I think that from the point of view presented above, besides the problem of frictions also the notion of the "good" appears in a certain particular light. According to the hitherto existing way of thinking we have a tendency to regard objects analogous from the point of view of nature, as identical specimens of the same good<sup>2</sup>. If it happened that man should individualise these objects, preferring some of them, the causes of this individualisation were attributed to extra-economic factors, and cases of this kind were treated as frictional phenomena. But investigating these cases from the standpoint taken by us, the apparent friction will prove to be the result of a methodological error which we commit identifying the theoretical conception of the good i. e. a certain quality subjectively ascribed to a certain object with the real specific features of objects. This error results from leaving out of consideration the circumstance mentioned already above, viz. that a considerable majority

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<sup>1</sup> "We do not say that the production of potatoes is economic activity and the production of philosophy is not. We say rather that, in so far as either kind of activity involves the relinquishment of other desired alternatives, it has its economic aspect. There are no limitations on the subject-matter of Economic Science save this".—Robbins, l. c. p. 16. It is different e. g. with Edward Taylor, according to whom "the distribution of a limited time between admiring a beautiful view and praying indubitably does not constitute an economic problem. But the distribution of that time between either of those occupations and the production e. g. of potatoes will constitute such a problem... For the problem of apportioning limited means to various aims belongs to the fields of economic considerations only with reference to material means of satisfying needs... or also to non-material, but only and solely if they serve directly to obtain those material means...". *Zagadnienie izolacji w ekonomice (The Problem of Isolation in Economics)* "Ekonomista", XXXIV, vol. III, p. 7.

<sup>2</sup> As is pointed out by J. Drewnowski, in his study quoted below, certain deviations from objective classification appear in literature as early as Pareto's *Manuel*.



of those objects unites in themselves the ability of satisfying more than one need and in consequence does not constitute one but several goods inseparably united with each other. (See above). And what is more important, almost each of several, naturally identical, objects, satisfies various needs in a different degree; almost each of them, even if it possesses the same features, and in consequence represents the same goods, does so in a different degree. The best evidence of this is the fact that from among the multitude of objects with which we always come in contact, we would not be inclined to exchange any one for another identical one, without feeling that we lose or gain something. With the exception of commodities which are the object of business in exchanges and relatively few objects, such as each of the cigarettes in the box lying before me, or each of the copies of the same newspaper at the newstand (but at the same newstand) the world of external objects is from the point of view of their ability of satisfying our needs a world of objects unique in their kind. Introducing into this world the idea of species, based on objective natural criteria, only roughly corresponding to the subjective estimates of the utilities attributed to them, we commit a generalisation, the consequence of which is a discrepancy between the hypothetical scheme of our argument and the results of experience. (Methodological "pseudo-frictions").

Treating each, subjectively felt feature of an object as a separate good and each physical object rather as a unique object than as an exemplar of a species, one would be able — as I suppose — to carry out a systematisation of phenomena without being always obliged to refer to undefined "extra-economic factors".

The acceptance of this view leads in consequence to the statement that the position of a person disposing of a unique object is a monopolist position. And as the existing objects are mostly unique of their kind the typical form of relations between possessors of unique objects will be monopoly or related monopoloidal forms <sup>1</sup>.

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<sup>1</sup> If I want to buy any object, e. g. a pencil, I often go to the nearest suitable shop (A), though I know that in a more distant shop (B) I could buy the same pencil cheaper. But the difference in price which I decide to

This conclusion which is only loosely connected with the problem of frictions forms the point of contact with the study of Mr. Drewnowski on the classification of goods<sup>1</sup>. But while Mr. Drewnowski's argument proceeds along the line of different estimation of the same object by different individuals, my remarks are concerned with different estimation of different (though naturally analogous) objects, by the same individual.

The science of economics in general treats free competition as a hypothetical normal state — and monopoly rather as an exception. In the light of the observations presented above it seems, however, that in investigating real phenomena, the hy-

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cover, is the price of my time, the equivalent of the fatigue with which my walking further would be connected etc. As for distance we frequently pay for details in the execution and packing of the commodity, of which we know that they are not essential, for advertising, for the beautiful equipment of the shop, for the courtesy of the attendant ("keep smiling"), for the reputation of the firm, and even for the religious denomination, nationality and political opinions of its owner. According to what has been said above, two identical pencils, one in shop A and the other in shop B are not two specimens of the same good, but each of them is a conglomeration of several goods in various quantities; therefore I am ready to pay for each of those pencils a somewhat different price. The owner of the shop situated nearer is a quasi-monopolist: nobody else is able to sell me a pencil which would possess in the same degree the ability of satisfying those particular needs of mine. The owner of this shop may exploit his position and obtain a monopolist rate, of course only to a certain, inconsiderable height, above which the purchase of a pencil in that shop would remove me from the state of equilibrium, instead of approaching me to it. I would then abstain from buying the pencil in shop A, for I would come to the conclusion that it will rather pay to sacrifice some more time or some other good and go for this purpose to the more distant shop B.

The same may be said of any of the remaining shops selling pencils or anything else. Assuming a perfect identity of the objects on sale in respect to quality etc., each of those shops is a quasi-monopolist, each of them offers me a unique specimen, for there are no two shops situated within equal distance from my residence, equally renowned, fashionable etc. And if by chance two such shops exist, this will be only an exception.

<sup>1</sup> J. Drewnowski, *The Classification of Commodities and the Problems of Competition and Monopoly*, "Economic Studies" II, published by the Economic Institute of the Polish Academy of Sciences and Letters, Cracow 1936. In this connection it may be interesting to note that the outline of the present article has been read by the author as a paper before the Economic Institute of the Polish Academy of Sciences and Letters already in December 1935.

pothetical assumption of the monopolist or a monopoloidal form as a rule and free competition as an exception, could give theoretical results which would be in higher degree than hitherto consistent with the empirically known process of phenomena<sup>1</sup>. For the supposition seems well founded that this hypothesis — using Mill's classical language — “of all hypotheses equally simple, is the nearest to the truth”. (*Essays*).

## Streszczenie

*Stefan Bolland: Zagadnienie frykcyj*

Punktem wyjścia powyższego artykułu jest pojęcie równowagi gospodarczej w jego klasycznym ujęciu, znanym pod nazwą drugiego prawa Gossena. Wbrew niektórym nowszym poglądom autor artykułu traktuje powszechność dążenia do wyrównania użyteczności krańcowej dóbr jako realną rzeczywistość; natomiast okoliczności, które stoją na przeszkodzie zrealizowaniu tego dążenia, określa mianem frykcyj, wzgl. zjawisk frykcyjnych.

Autor wyróżnia dwie grupy frykcyj, a mianowicie zjawiska powodowane przez upływ czasu i zjawiska wynikające z niedoskonałej podzielności dóbr.

Zjawiska frykcyjne, związane z faktem upływu czasu, wynikają ze znanej na ogół niewspółmierności między częstością zmian dat gospodarowania a długością okresów przystosowania. Zbyt częste (w stosunku do długości okresów przystosowania) zmiany dat gospodarowania, do których to dat zalicza się z jednej strony subiektywną intensywność odczuwanych potrzeb, z drugiej zaś ogół warunków przyrodniczo-technicznych, utrudniając względnie uniemożliwiając wyrównanie użyteczności krańcowych. Rozmiary zjawisk frykcyjnych tej grupy, są w ścisłym związku z typem gospodarki; są one na ogół najmniejsze przy prymitywnych formach gospodarowania, w gospodarstwach izolowanych, autarkicznych, w gospodarstwach nie stosujących w produkcji kapitału, produkujących dla bezpośredniego zaspokojenia własnych, aktualnych potrzeb. Potę-

<sup>1</sup> Cf. J. Robinson, *The Economics of Imperfect Competition*, London 1934.

gują się zaś te zjawiska w miarę przechodzenia do wyższych form ustrojowych i osiągają swe maksimum w gospodarce wielkiego kapitalizmu.

Istota zjawisk frykcyjnych drugiej grupy polega na praktycznej niemożności dostatecznie ścisłego dozowania dóbr. Niemożność ta ma swe źródło bądź to w formach handlowych, bądź też znowu w warunkach przyrodniczo-technicznych. Wyklucza ona ze zjawisk gospodarczych pewne stadia pośrednie, wskutek czego przebieg ich ma charakter kwantowy a nie ciągły. Wynikające stąd frykcje komplikują się zwłaszcza w praktycznie b. licznych przypadkach, w których poszczególne przedmioty jednoczą w sobie zdolność zaspakajania kilku potrzeb; bowiem stosunki ilościowe pomiędzy poszczególnymi, subiektywnie ocenianymi cechami danego przedmiotu, ograniczając swobodę wyboru, w pewnym zakresie z góry wyznaczają stopień zaspokojenia poszczególnych potrzeb.

Rozwijając to zagadnienie, odrzuca autor wszelkie kryteria obiektywne pojęcia dobra, wykazując, iż identyfikowanie tego pojęcia z pojęciem przedmiotu w rozumieniu przyrodniczym, prowadzi do błędnych konsekwencji metodologicznych. Przez dobro należy bowiem rozumieć subiektywnie przypisywaną danemu przedmiotowi właściwość zaspakajania jakiejś potrzeby, przy czym w rzeczywistości poszczególne przedmioty, jednoczące w sobie zazwyczaj wiele takich właściwości, uważać należy za niejako konglomeraty dóbr.

Pojęcie dobra, oparte na kryteriach ściśle subiektywnych, jest — zdaniem autora — dlatego pożyteczniejsze, iż umożliwia ono wytworzenie poglądu na świat zjawisk zewnętrznych, wolnego od niejasnych i kłopotliwych tzw. „czynników pozagospodarczych“, których wpływ, zakłócający rzekomo grę „praw ekonomicznych“ określany bywa czasami również mianem frykcji. Terminologię tę uznać należy za niewłaściwą, gdyż miesza ona ze sobą pojęcia z zakresu morfologii zjawisk, z koncepcjami metodologicznymi.

W dalszym związku z powyższymi uwagami pozostają wnioski końcowe, dotyczące powszechności form monopoloidalnych, które to wnioski autor zaznacza na tle subiektywnej konstrukcji pojęcia dobra.



## ABSTRACTS FROM CONTRIBUTIONS TO ECONOMICS PUBLISHED IN POLISH IN THE PERIOD 1934—1936

Dr Aleksy Wakar, lecturer in the High School of Commerce in Warsaw, *Teorja płacy roboczej. Biblioteka Ekonomisty tom 1. Nakładem Towarzystwa Ekonomistów i Statystyków polskich Warszawa 1935. (Theory of Wages, Warsaw 1935, 201 pag.).*

From the analysis conducted by the author in the introduction, we see that labour wages form an integral composite part of a given economic system, and may be defined only by an analysis of the conditions of economic equilibrium. The author, however, is of the opinion that it is not enough to fix the formal dependence of labour wages on all other economic quantities. It is necessary also to examine carefully the particular connections which come within the system analyzed, viz. the following problems:

1. Wages, and the prices of the ready goods.

2. Wages, and the general efficiency of the industrial processes.

3. Wages, and the direction of demand and the division of social income.

4. Wages, and the prices and efficiency of the particular industrial factors.

An examination of the particular connections should be made against the background of all other dependencies, and with a constant regard to their existence.

Proceeding to a meritorial examination of the problem of labour wages, the author begins with an analysis of the influences of money factors on the reward given for work. The influence on wages of the increase or decrease of the currency may be direct or indirect. The indirect influence appears in the case



of an advanced inflation for treasury purposes; for then wages only passively (ex post) imitate the upward movement of prices by accommodating themselves to the "index of the cost of living". On the other hand, inflation for economic purposes directly reacts on the nominal and real rate of labourers' wages, since it calls forth an increase of demand for the services of industrial factors. Since, however, it is impossible to pass from one point of equilibrium to another without disturbing the whole economic system, so the increase, or the decrease of the currency course calls forth changes in the nominal as well as in the real reward of the labourers. In the following chapter, the author abstracts from the influence of monetary factors on labourers' wage.

Besides money factors, the following factors also react on the shaping of labourers' wages:

1. A change in the general efficiency of industrial processes. Such a change results from the following causes: first, fundamental changes may arise in the structure of a social economic system of a character partly non-economic; for instance, a suitable organization of the government of a community assures quiet within it and stimulates the intensity of productive effort. A will to work is developed and thus the particular members of the society instead of spending their time doing nothing, to a greater degree devote themselves to the production of economic goods; secondly, new inventions and new ways of organizing industry make the processes of production more efficient, thus aiding in producing a larger quantity of the product, which falls to the share of the owners of the industrial factors (brings about an increase in the rate of the labour wage).

2. Change of the direction of demand and the division of the social income. The change in the tastes of the population, calling forth an evolution in the demand for finished goods, and indirectly for the services of the industrial factors, causes a change in the prices of the factors of production, and among others, a change in the wage rate. In turn the evolution of tastes takes place on the one hand under the influence of non-economic factors, and on the other, partly as a result of processes strictly economic, in which the

author includes first of all changes in the levels of the budget of particular individuals caused by the general increase or fall of prosperity, or also resulting from changes in the division of the social income.

The author attaches special weight to a proper analization of the influence of efficiency on the shaping of the labour wage, as well as of the influence of the amounts and the market prices of the particular industrial factors. In connection with this the author examines the following problems:

A. Supply of work and the labour wage. The supply of work decreases with the increase of the labour wage. However, the succeeding increase in the supply of industrial forces in the possession of the labourers, aids, within certain limits, in the stabilizing of the supply of the services of work, since it reacts in the opposite direction on the amount of work offered, from the evolution of the evaluation of the labourer of free time and earnings.

The general supply of work depends upon the number of people and upon the quantum of work offered by the particular worker. The individual supply of labour is to a certain degree defined by external conditions, namely by the compulsory regulations of the length of the work day. The author, however, is of the opinion that the very possibility of the labourer's passing from one enterprise to another, which requires work of a different intensity, permits the labourer to regulate his own supply of work, in accordance with his evaluation of the reward received, time of work and rest.

According to the author, the wage system has an important influence on the shaping of the supply of work, and that for two reasons: (1) it limits to a greater or lesser degree the choice of the labourer of the length of the work day most suitable for him and the extent of use of industrial strength and (2) it directly affects the decision of the work, determining the extent of the work offered. The application of agreement or premiums lessens the supply of work, since in these systems of wages the last hours of work are less well rewarded, and on the contrary the introduction of higher rates for over-time work makes possible, as the author thinks, a considerable increase of the

supply of work even when an equal increase of earnings would bring about its decrease.

Furthermore the following factors react on the supply of work:

a) More or less advantageous conditions of existence influencing the physical and moral state of the workers.

b) Beneficial and purposeful use of their industrial capabilities.

c) Quick and effective methods of teaching. The author furthermore considers that with time the appreciation of the labourers of free time and wages may undergo a change. E. g. the popularisation of sports, the perfection of publishing technique, the accessibility of inexpensive recreations and the like, undoubtedly raise the appreciation of the worker of time free from work.

In the chapter under discussion the author states that a relative increase of the supply of work in comparison to the supply of other industrial factors usually brings about a lowering of the worker's earnings.

B. Demand for work and labour wages. The author separates three groups of factors which react on the course of the curve of demand for labour, (indirectly also on the rate of labour wages) — namely:

1. The supply of other industrial factors, (the author includes them in the conception of capital). The increase in supply of these industrial factors causes *ceteris paribus* an increase in reward for the services of work. In turn the total sum of capitals, which a society disposes depends on a) phenomena of monetary character (the change in value of industrial goods, expressed in monetary units), b) the tempo of accumulation of a new capital (the activation or immobilization of means of production in the possession of the society).

By way of example the author names the following factors which foster a quicker accumulation of real capital (bringing about thus a raise in the rate of labour wages):

a) A good organization of the money and credit market.

b) A purposeful division of the social income (customs, taxes).

c) An increase of the efficiency of industrial processes.

d) Foreign loans.

2. Reward for the services of capital. The author asserts that an increase in the reward for the services of capital (increase of the interest rate) brings about an increase in the need for labourers and with it an increase in payment for work.

An increase in the reward for the services of capital, according to the author, results from:

a) A greater absorption on home and foreign markets (new inventions the arising of new necessities, the amelioration of means of communication, the revival of international exchange and the like).

b) Good business revival.

c) Transition from the natural economic system to the monetary system.

d) Public works.

3. The Efficiency of the factors of production. The increase in the efficiency of labour (per individual) and the decrease of the efficiency of capital result in the increase of the rate of labour wages (et vice versa). In turn the efficiency of work depends on the physical and moral state of the labourers, on the perfection of labour methods and on the shaping of social conditions. In a similar way the author divides the factors bringing about a change in the efficiency of capital into the following groups: a) technical perfection, b) a change in the sales value of the particular objects of real capital, for instance, as a result of placing of a duty on machines imported from abroad, c) the decrease or increase of the value of lands, possessions, mines, and the like.

Doubtless, changes in the efficiency of the factors of production influencing other economic quantities, bring about secondary movements, that is, they call forth an influence of the above mentioned economic quantities on the efficiency of industrial factors. This mutual influencing of certain factors on others last to the time of their exact mutual accomodation, i. e. to the moment of the stabilization of new economic equilibrium. The above observation as the author emphasizes, affects in an equal degree changes in other economic quantities, which react on the shaping of the rate of labour wages.

In the above discussed chapters the author was interested



in an analysis of the labour wages given the existence of free competition. In turn the author passes to an examination of the influence on the shaping of labour wage of a monopoly either of the labourers, as the providers of the industrial force, or of the entrepreneurs, as its consumers. The author assumes, however, that each of these monopolistic organizations forms only a small part of the total national economy, since the monopolization of the whole labour market, or of all the enterprises would point undoubtedly to a change in the fundamentals of economic life. An explanation of this phenomenon would not therefore fit within the limits of one theory of wages.

The chapter on monopoly includes a discussion of three following problems:

1. The trade-union in the character of a monopolist.
2. The monopoly of the entrepreneur.

3. The bilateral monopoly (a monopolistic understanding of the entrepreneurs contra the trade-union).

From the analysis conducted by the author, it is evident that the point of equilibrium between supply and demand for work corresponds to the defined rate of labour wages, in dependence on each separate system of economic quantities, forming the social economy.

Labour wages, however, because of their non-elasticity do not follow exactly the changes of other economic factors. The non-elasticity of wages has its source in the natural and social phenomena:

The lower limit of reward, corresponding to the so-called "minimum of existence" as a mass phenomenon may never be crossed. This is the first reason for the non-elasticity of wages. The second reason is the conscious activity of certain social factors, aiming at the stabilization of earnings (trade unions, industrial organization, and finally public opinion). According to the author, structural unemployment is one of the most important results of the non-elasticity of wages.

To make the connections existing between the wage rate and all other factors of a social economy more elastic, the author has sketched in the last chapter of his book the economic organization of a society, in which there always may

exist high wages not calling forth, however, economic disturbances as for instance, structural unemployment.

In such a society we should fulfill the following principles namely:

I. A great efficiency of industrial processes, and a wide range of production, thanks to which a great quantity of the product is received for division.

1. A great spirit of enterprise of the population, ability to work steadily, constant tending to a given purpose.

2. An unusually economic character of activity, which may be defined as the tendency of the people to increase their material well-being.

3. Advantageous natural conditions (climate, soil, natural wealth, and the like).

4. Popularisation of technical knowledge and accumulation of a great quantity of real capital.

5. Stabilization of social conditions, a social system permitting the selection of capable and economically active individuals.

II. The direction of necessities, assuming a large demand for the products of manual labour (or for merchandise having a large coefficient of work) and personal services.

III. A limited in extent supply of labour:

1. a) A comparatively high evaluation of time free from work, taking into consideration the popularisation of cultural needs, whose satisfaction does not require often material sacrifices.

b) An intensive taking part by the workers in social life, the fulfilling of honour functions, the taking part in political work, and so forth.

c) Sport.

d) A healthy and firm foundation for the worker's family.

2. a) A limiting by law or custom of the length of the work day; forbidding of over-time work, limiting of the work of women and children, school required.

b) The existence of sufficiently strong labour associations, possessing indispensable influence political and economic, and able to work against the tendency of the entrepreneurs to lengthen the work-day.

3. Popularisation of the agreement and premium systems of wages.

IV. The accumulation by the society of large sums of wealth in the form of real capital and purchasing power.

1. a) The sense of saving; the technical facilitating of saving in the form of popularized suitable credit institutions.

b) Suitable organization of the money market generally, the assurance of a steady currency and untouched savings.

2. A comparatively large differentiation of the social income.

a) A taxation policy not hindering the accumulation of capitals in the hands of enterprising individuals; the substitution of direct progressive taxes by indirect taxation of the population.

b) A moderate customs tax, chiefly on agricultural products

3. A comparatively inconsiderable share of the government in the social income:

a) A thrifty organization of the government apparatus.

b) A comparatively small extent of non-productive taxes (for instance, for armaments, the maintenance of a numerous army etc.).

4. A generous influx into the country of foreign capitals.

5. A gentle course of business cycle phases, in relation to:

a) The elasticity of the organization of production.

b) The organization of the money and merchandise market.

c) The purposeful regulation of the industrial activity of the government.

V. The rentability of capital (high interest rate).

1. A great ability for enterprise on the part of the population, resulting in the rise of new needs and requiring the constant renewal of industrial installations, — the possession of foreign markets, absorbing a constantly growing amount of merchandise.

2. The gradual transition from a natural to a monetary economy; the amelioration of means of communication.

3. The assurance of peaceful relations at home and abroad; economic optimism.

VI. A considerable efficiency of labour:

1. A large store of industrial strength the share of each individual worker, physical health, habits of steady and intensive work; considerable insusceptibility to psychological tiredness.

2. Good and hygienic conditions of work; purposeful organization of its methods.

3. The elimination of social disagreements, e. g. strikes, constant labour dissatisfaction, the boiling point, etc.

VII. The elasticity of wages as well as of other economic quantities preventing the immobilization of real capital.

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Michał Kalecki i Ludwik Landau: *Dochód społeczny w r. 1933 i podstawy badań periodycznych nad zmianami dochodu*. Warszawa 1935. *Instytut Badania Konjunktur Gospodarczych i Cen. Badania nad dochodem społecznym w Polsce, t. 4. (National Income in the year 1933 and the Basis of Periodical Studies on the Changes of Income. Warsaw 1935. Institute of Business Cycles, and Prices. Studies on the Social Income in Poland. Vol. 4).*

In the paper discussed in the previous number of the "Studies" an assessment of the social income in Poland for the year 1929 was attempted. This assessment referred to the period of prosperity and the need for completing it by an assessment for one of the following years was felt, not only from the point of view of bringing the calculations up to date but also — and above all — of making calculations for the period of the depression, to obtain some basis for defining its influence on the general extent and division of the social income. The year taken as illustrating the effects of the depression in full was 1933.

A calculation of the changes in the social income during the years 1929—1933 could not, however, be undertaken with an assessment of the income in 1933 by the same method as in 1929 and a comparison of both years. For this method required materials which in the year 1933 were not at hand — above all — as a method assessing income in the moment of its use — data concerning the structure of the family budgets of townspeople, the study of which for a certain time conducted systematically by the Chief Statistical Bureau, was interrupted in the year 1929. In view of this fact such a method of calculation was applied, by which were defined for the particular social groups the relations in which their incomes changed in the years 1929—1933; having measures fixed in the previous assessment



the share of each of these groups in the whole of the social income for 1929, it was possible thence to calculate the change to which the whole income was subjected: the sums of the incomes from the year 1929 served as a measure for the indices of the incomes of the particular groups.

The aim of this was obviously to define the changes in real incomes: If then in the practice of calculations it was necessary to trace in principle the changes in the sums of normal incomes, it was only in order to next compare those changes with the changes in the price level which fix the changes in the purchasing power of the incomes.

Calculations were not made on the natural incomes of the country people, a position, for that matter, of great weight in the social income of Poland. The materials, however, referring to this position, did not seem complete enough to conduct a proper assessment, and therefore in principle only those parts of the social income whose realization lies in market exchange were calculated.

Likewise certain limitations in the extent of calculations, brought about through lack of material, had to follow for the changes in the quantity of accumulated income. Ready calculations concerning the changes in the extent of investments were made use of here (investments understood — we must remember — as gross investments without deductions for the necessity of the amortization of the existing fixtures and installations); these calculations, based on data concerning the turn-over or production of investment materials, give directly the real changes of the investments. But the remaining forms of objective accumulation were not taken into consideration — that is, the changes of supplies or the surplus of export. Although concerning the latter position there exist data, nevertheless there is none whatever for the former, and to take only one of them into consideration would be without purpose, since these positions change in the opposite direction, and their movements in part cancel each other.

Since the changes in the extent of investments have been already calculated, the work consisted in defining the changes in the consumption of the particular groups of the population:

the consumption of the towns-people and the market consumption of the country-people.

The most concrete data were available concerning the incomes of that portion of towns-people living from hired labour, (the changes in consumption of this group were identified with the changes in the incomes). Namely the work was based in part on direct data concerning salaries (government employees), in part on data concerning sums paid in to social insurance offices (Office and professional workers' insurance, labourers' unemployment insurance, general sickness insurance), taking into account changes occurring in the meantime in the proportion of the amounts paid in to the salaries.

Concerning the incomes of the small business men, the calculation was based on the changes in quantitative turn-over and individual earnings margins in two great fields of small business — in trade and in manufacture of articles of food and clothing. The changes in the earnings margins were fixed by a comparison of the changes in the retail prices of ready products with the changes in the prices of the purchased half-products, taking into account the changes in the costs undergone. In an analogical manner the changes in the pecuniary portion of the incomes of the small farmer (together with the farm workers) were calculated with a certain control for these calculations to be found in the materials of the Puławy Institute. The changes in the consumption of city entrepreneurs and large estates owners were assessed approximatively only, with view to the small elasticity of the consumption in these groups.

Results obtained in this manner were checked by the production method, assessing the changes in the course of the years 1929—1933 in the quantitative production of the chief branches of the economic system. The agreement of both methods proved quite satisfactory.

The social income of Poland proves in the light of these results to be diminished quantitatively by 25% (nominally by 50%). The accumulated portion shrank most, obviously — the fall in the investments amounts to 64%; but consumption also diminished very noticeably — 19%. Town consumption diminished 13%, country market 46%; the whole of the country consumption obviously was not subject to such a radical change,

since natural consumption fell as always, only a little — however, there occurred the eliminations, to a great extent, of the country district from the market turn-over, by consumption articles. Of the group of townspeople, the labourers felt the depression very strongly with a fall in consumption of 22%, the small business men not much better — 19%, while on the other hand the consumption of the professional and office workers increased somewhat in real value (in the total quantity, not per capita).

Taking these results as a basis, an attempt was made to construct indices, presenting periodically the development of social income. The development of its accumulated portion was in great part already grasped in the form of the investment index. On the other hand there was a lack of the indices of consumption. Although there existed periodically calculated indices of the consumption of defined articles, these were far, however, from embracing the whole; since furthermore these articles show a different elasticity in the changes of incomes, their consumption oscillates more strongly or more weakly in comparison to the general consumption. With the moment, however, when the change of this general consumption in the course of the business cycles of the years 1929—1933 was defined, the possibility arose of correcting the variation of oscillations and applying it to the amplitude of oscillation of the whole consumption. In this way every index of the consumption of a certain article became a general index — with the reservation, obviously, of the element of chance appearing in particular articles; the influence of chance eliminates the taking into consideration of certain articles and the working with the averages of these particular indices. As articles characterizing town consumption yeast (forming a measure for the consumption of wheat baked-goods) and moving picture houses attendance were used; as characterizing farm consumption, kerosene; finally as characterizing the whole of consumption, sugar and tobacco products. Thus initiated the calculation of the indices of consumption have been henceforth conducted by the Institute for the Study of Business Cycles.

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Olgiert Tuszkiewicz, *Przesilenie zbożowe w Polsce. Poznańskie prace ekonomiczne, nr 20. Poznań 1934. (The Grain Crisis in Poland in the years 1929—1933, 13. pages).*

The essence of the economic crisis in agriculture, beginning in 1929 consists in a fall of the prices of agricultural products below the costs of production. This is an economic condition especially grievous in a country where 73% of the population is composed of farmers. The crisis in Poland is not an isolate phenomenon, but is only a fragment of the general world condition. For the cause of the fall in prices was an over-production of grain on the world market. The origin of this surplus has been thoroughly and from every point of view explained in many papers on that subject. The existence of that excess is excellently depicted in the statistical accounts of unsold supplies of grain and in a comparison of the increase in the population of Europe, which uses about 80% of the world's export of wheat, with the world increase in grain produce. It appears that in 1930, compared with the year, in 1913, the population of Europe (without Russia) increased 8.2%, while the world's wheat production increased 19%. Unsold supplies beginning with the year 1929, have surpassed the average yearly commercial grain turn-over of the world.

The unprofitableness of grain production is especially evident from the beginning of the depression. In Poland as in other countries after the World War, the costs of production increased, especially labour, all kinds of taxation, insurance, credit and industrial manufacture purchased by the farmers.

A phenomenon especially characteristic of the present agricultural crisis is the high cost of capital and its lack. It is true that thanks to inflation many farmers were able to get rid of previous mortgage burdens, but they were unable to obtain new loans on conditions which would correspond to the rentability of farming enterprises. In reality, furthermore, such mortgage credit after the war does not exist, and in many cases, economically justifiable, it is indispensable. One must add to this the investment craze which had seized the farmers under the influence of a political program of self-sufficiency, and of excessively optimistic calculations, called forth by an unusually prosperous condition of the grain market in the years of prosper-



ity (1926—1928). Indebtedness for the purpose of investment was considered almost a national obligation, and when the depression began many of these investments became unprofitable grievously burdening the farms.

As a result of the lack of a suitable accounting system, which would permit of generalities without important reservations, it is impossible to fix exactly the relation of production-costs to the market prices of farm products. Nevertheless, the exceptionally difficult economic position of the farmers from the smallest to the greatest, is absolutely obvious. The significant fall in their purchasing power is a proof of this — in other words, the farmer does not invest, limits his personal expenditures, withdraws from financial contact with the outer world, approaching the closed self-sufficient forms of economic units.

As concerns the course of the depression, we may say that a reduction tendency in the price of Poland's chief grain, that is rye, was already visible in year 1928, and a strong and constant fall began with the spring of the year 1929 — in other words, it preceded the change in the prices of grain on the world market by half a year. This was caused by the special situation of our grain market, which from the time of the rebirth of the Polish state was subject in turn to various limitations hindering free trade abroad. Especially in the period directly preceding the beginning of the depression our grain policy was aimed at the harmonizing of purposes mutually excluding each other, as for instance, the lowering of the price of grain and the increase of its production by way of the intensifying of farm enterprises. A complicated system of regulations was then introduced, which in reality created in Poland a closed grain market, due to the paralysing of free trade abroad. This system of regulations, awakening uncertainty in commercial relationships, was one of the causes of the raise in the prices of grain, contrary to the intentions of the economic policy, until a great excess of supply burdened the market, brought about by good harvests and an unfortunate accumulation of supplies of the so-called "grain reserve" financed from budget funds. The fall in prices could not be stopped by preventative measures provided such as contingents of free-duty export and later the abolition of export duty. From spring to autumn 1929 the price of rye had fallen

by one third. This state of things brought about the change of our grain policy in quite the opposite direction. In order to facilitate the export of excess supply, and to raise in this way the prices on the home market, export premiums were introduced and motivated by the necessity of returning the price of the duty on fertilizers, machinery, and tools imported by the farmers. To assure a home market exclusive for our farmer a system of import duties was created. To acquire a more equal division of supply over the course of the year, special credit was fixed for the registered deposit of grain. The over-supply of grain on the market was to be done away with by interventional purchase, which was granted to a government enterprise (The National Grain and Industrial Institutes). A number of bills were passed, aiming at the normalization of the exported merchandise at the assurance of precedence for raw materials of home production. Railway tariffs were lowered. But the unrentability of grain products constantly increased, in connection with the decrease of money turn-over of the enterprises, and a constantly greater burden was imposed by the non-elastic production costs, that is labour, taxes and interest on debts. The intensity of the economic crisis in agriculture increased more strongly than in other divisions of production. In the year 1931 it was obvious that the maintenance of the price of grain by the above mentioned methods was incapable to return the profitability of agricultural products. Then further provisions were applied, aiming at the lowering of the first costs in agriculture. The insurance rates were lowered and later it was decided to do away with insurance compulsion for agricultural labourers in the Sickness Insurance Offices, back payments on taxes were cancelled, the percentage rate on loans made to agricultural workers was lowered, the regulation of the debts of the greater part of agricultural ownership was facilitated by means of selling off small lots, moratorium bills were passed, making the auction of country farms difficult, and a number of indebtedness bills were introduced which transferred a part of the burdens of the farmers onto their creditors. Finally the efforts of the government aiming at the lowering of the prices of industrial products were said to have caused the creation of the so-called "shears" situation.

Of the whole group of enumerated methods the most effective were the export premiums and their result was most important from the point of view of advancement in social income.

The export premiums were introduced in November 1929 in the amount of 6 zł. per 100 kg of rye and wheat. Premiums on the export of oats, barley, flour and malt were subject to change. At the beginning, that is, in the year 1930, the premiums increased the price of grain in the country more or less by  $\frac{2}{3}$  of its pool, in other words, the market price of rye in Poznań was on the average 4 zł. higher in comparison with the price on the markets of our customers which was lowered by the deduction of the price of import from Poland.

In reality the influence of premiums on the home price was very varied in the particular towns and localities of Poland. The Poznań district produces the greatest amount of grain over and above its own needs and exports the most. The results discussed of the activity of premiums concern the Poznań district.

In the winter 1930/31, the Grain Institutes (P. Z. P. Z.) began their interventional buying up of rye, becoming immediately the greatest, and later the only exporter. From this time on, the system of premiums and the buying activity of the grain institutes become in reality one whole from the point of view of the influence brought to bear on the price. So long as the premiums were to appear at their height in the home market price, then only through the subtraction of the surplus of supply over demand it was possible to maintain prices on a certain level, for otherwise, as a result of the oscillation of prices a part of the premiums would go to cover the buying risk. But the artificial maintenance of prices brought losses which were covered by the Treasury. Furthermore, the government enterprise intensively buying up the surpluses of supply in certain periods raised the prices above the trade calculation of the exporter, attaining in this way the increase of home prices above the level of the prices on the market of the importers. In the summer of 1931 the home price on the average surpassed by 10 zł. the price paid on the markets of the importers, minus the cost of import from Poland. There arose

thus 4 zł. extra-premium. Of course this type of activity resulted in large payments out of the budget sums, since the grain abroad was sold more cheaply than the price of purchase, plus 6 zł. premium. The same was repeated in following years, that is, the grain institutes conducted interventional buying during the autumn and winter, thus raising the price at home above the world level. In the autumn of 1933 the price of rye in Denmark and Holland after subtracting the costs of import amounted on the average to about 5 zł. per 100 kg. In Poland on the other hand, the market price amounted to about 15 zł., in other words, it completely attained the price level desired. The grain institutes at that time besides the 6 zł. premium were granted also for each exported 100 kg. an added 4 zł. in return for export costs to the ports of consumers.

In order not to complicate the picture we shall limit ourselves to rye alone. Interventional activity in connection with the prices of wheat was only sporadic. Export of other grains took place on basis of buyer's calculation. The granting of premiums for the export of other grains besides rye was indispensable since a surplus of a certain grain reacts negatively on the prices of the other grains.

How does this technically unusual result of the raising of prices from the point of view of the division among the people of the help intended for the farmers in the form of export premiums together with the loss of the grain institutes look?

Since the farmers do not sell grain directly to the consumers, or in this case to the exporters, there arises a difference between the market price and the price paid to the farmer. The latter is lower. If then from the amount of the premium or extra-premium included in the market price, we subtract the difference between the market price and the price paid to the farmer, we shall see that in 1930 the farmers received about 50% of the pool of the duty return, or in other words 3 zł. on every quintal of rye sold. In the following years, however, when in particular periods the extra-premium amounted to from 4 zł. to 7 zł. per quintal of rye, then the farmer obtained only from 2 to 3 zł. extra-premium. This is a natural phenomenon, resulting from the shaping of prices in conditions of uncertainty, and is the more significant that the farmers ob-



tained comparatively less; the greater the intensity of intervention, in other words, the greater were the payments of the Treasury for the covering of export losses, arising as a result of the raising of the price at home above the level of the prices of the free trade markets of the consumers. At the same time the merchants, however, did not enrich themselves either.

If it is a question of the home consumption of the non-farmer, then in the internal turn-over we may say that he loses as much as a result of the higher price as the farmer gains. On the other hand the calculation of the gains and losses, which arose in external turn-over show that the losses born by the non-farmer part of the population to the advantage of the farmers are considerably higher than the gain of the latter. In Polish conditions this enburdening is very important from the point of view of the division of the social income, since the city population, composing about 30% of the total population undergoes losses on the export of grain to the advantage of 70% of the farm population. These losses are born in order to export from the country an amount of grain amounting to scarcely  $\frac{1}{4}$  to  $\frac{1}{3}$  of the whole consumption of the town people. From the point of view of foreign drafts such a policy also does not pay. For to the prices of the drafts, obtained from the export, it is necessary to add the quotas paid for return of duty. In this manner the bill for the agricultural years 1930/31 shows that the Treasury for every gold dollar gained from the export of grain paid about 12 zł. instead of 8.9 zł.

These are natural and understandable consequences, when a country, being from the point of view of agricultural production practically self sufficient, in other words, with export surpluses which are not large and not constant, tries to maintain in spite of the economic crisis the previous level of its production and artificially maintains in agriculture capitals bringing no profit. From one point of view our export premiums deserve some justification. The drop in the prices of grain in the recent years was too violent bringing many enterprises to bankruptcy as a result of the unprofitability of grain production. The task of the premiums was to make the drop in prices easier. On the other hand a too great buying up of grain by the grain institutes called forth an increased supply. The farmer sold all his

grain, because it paid him comparatively better to do so. But the consumers' markets were flooded with grain. Its increased supply brought about the further lowering of the price in the Baltic markets and in turn reacted negatively on the level of prices in Poland.

For these same reasons the registered deposit of grain in that period of the crisis under discussion did not give the expected economic results. When new grain is cheaper than grain of the previous years it is difficult to expect the farmer to withhold his supply in the fall, when the taxes and other yearly expenses must be paid. Likewise high import duty pools remained ineffectual, since from the year 1930 we constantly export grain.

At the same time the measures aiming at the lowering of the first costs in agriculture were insufficient. As a result of the high customs barrier on industrial merchandise and the kartel policy, the scissor angle constantly increased to the disadvantage of agriculture. While the index of the prices of articles sold by the farmer fell towards the end of 1928 zł. to 40 in 1930, the index of the prices of articles ready for agricultural production fell only to 90, and the index of the prices of karteled articles rose to 107.7. A very insignificant change for the better from this point of view occurred only in 1934.

Tax regulations in many cases were a reward for the worst tax-payers. The cancellation of arrears in tax payments did not in reality react on the lowering of the first costs, since these debts arose as a result of overestimation of an income which in reality did not exist and in case of execution in many cases would be paid from the property.

Debt-cancelling legislation which formed an important relief for indebted factory plants, deprived the masses of farmers of private credit and put off at the same time the liquidation of over-indebted farms. In many cases these laws painfully affected the farmers themselves, since a considerable portion of indebtedness arose from the turn-over of land, inheritance divisions, neighbour loans etc. Taking advantage of this period of leniency even those debtors who could fulfill their obligations did not pay.

All extra payments, resulting from the rise in the price of grain at home, deprived the Treasury of the ability of undertaking those burdens in connection with the general agricultural crisis.

Agriculture must gradually accommodate itself to the payment of low prices by the lowering of the costes of production.

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